THE EFFECTS OF ADDITIONAL REVENUES FROM CAPITAL OUTLAY TRANSFERS ON THE EQUITY OF A STATE SCHOOL FINANCE SYSTEM

BY
MARY LOUISE McMANIS CHAMBERS

A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL
FULFILLMENT OF THE REQUIRMENTS FOR THE
DEGREE OF DOCTOR OF EDUCATION

UNIVERSITY OF FLORIDA

1996

ACKNOWLEDGMENTS

I express my sincere appreciation to the people at the Department of Educational Leadership of the University of Florida without whose patience and assistance my doctoral studies would not have been successful.

I especially appreciate Dr. David S. Honeyman, chairman of my doctoral committee, who encouraged the pursuit of my doctorate and assisted me every step of the way.

Dr. R. Craig Wood, Dr. James Hensel, and Dr. David Miller, members of my doctoral committee, provided the technical knowledge and support I needed for my doctoral studies.

I express a special thanks to my family for their encouragement and to my friends and colleagues for their assistance.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

ABSTRACT v

CHAPTERS

I INTRODUCTION 1

- Introduction 1
- Statement of the Purpose 14
- Objective 14
- Significance of the Study 15
- Limitations of the Study 16
- Overview of the Methodology 16
- Definitions 17
- Summary 18

II REVIEW OF THE LITERATURE 19

- Introduction 19
- Principles of School Funding Equity 19
- History of Equity 25
- Selected Equity Cases 32
- Previously Decided Cases Applicable to Florida . . . 41
- Categorization of School Financing Challenges . . . 51
- The Florida Formula 53
- Summary 60

III METHODOLOGY 61

- Introduction 61
- Statement of the Purpose 61
- Research Design 62
- Data Sources and Measures of Equity 63
  - Box Plot 63
  - Mean 63
  - Range 64
  - Restricted Range 65
  - Federal Range Ratio 65
  - Variance 66
  - Standard Deviation 67
  - Coefficient of Variation 67
  - McLoone Index 68
  - Gini Coefficient 68
  - Lorenz Curve 69
  - Simple Correlation 70
  - Slope of Regression Line 71
- Summary 72

Page

IV DATA ANALYSIS 74

Measures of Equity 75
Box Plot 75
Mean 75
Range 76
Restricted Range 77
Federal Range Ratio 78
Variance 79
Standard Deviation 80
Coefficient of Variation 81
McLoone Index 82
Gini Coefficient 83
Lorenz Curve 84
Measures of Fiscal Neutrality 84
Correlation Coefficient 84
Coefficient of Determination 86
Slope of the Regression Line 87
Summary 87

V SUMMARY, FINDINGS, CONCLUSIONS AND IMPLICATIONS. . . 90

Summary 90
Findings 92
Conclusions 93
Implications for Public Policy 94

REFERENCES 95

APPENDICES 100

A BOX PLOT GRAPH 100

B LORENZ CURVE GRAPH 101

BIOGRAPHICAL SKETCH 102

Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

THE EFFECTS OF ADDITIONAL REVENUES FROM CAPITAL OUTLAY TRANSFERS ON THE EQUITY OF A STATE SCHOOL FINANCE SYSTEM

By

Mary Louise McManis Chambers

May, 1996

Chairman: Dr. David S. Honeyman
Major Department: Educational Leadership

The purpose of this research was to extend equity analysis to include capital outlay fund transfers made to the general fund for educational expenditures. It included analysis of the equity of the Florida Education Finance Program revenue in the general fund before capital outlay transfers and after capital outlay transfers into the general fund.

In fiscal year 1994-95, the projected revenue needs for capital outlay for public school districts statewide were $1.6 billion dollars. Revenue available for capital outlay purposes was $1.3 billion dollars. Of the $1.3 billion available for capital expenditure from the capital outlay funds, more than 25 percent was transferred to the general funds of districts statewide. Transfers of capital outlay funds impacted the construction and renovation of schools in Florida as well as the fiscal equity of education funding.

The effect of the transfer of capital outlay funds on the equity of school funding was determined using statistical measures. The results of the study indicate that, without capital outlay transfers, the Florida Education Finance Program was a highly equitable funding distribution system. Conversely, capital outlay transfers increased the variation in the distribution of revenues which indicated a disequalizing effect on school funding in Florida.

Calculations of the box plot, restricted range, federal range ratio, variance, standard deviation, coefficient of variation, McLoone index, Gini coefficient, and Lorenz curve indicated decreased equity in the distribution of funds among Florida school districts. Calculation of the range increased equity among the school districts.

Calculations of the correlation coefficient and coefficient of determination indicated decreased fiscal neutrality as a result of the capital outlay transfers. Calculation of the slope of the regression line indicated a negligible effect on fiscal neutrality.

CHAPTER I

INTRODUCTION

Education is big business according to almost every textbook written on education finance over the last 50 years.[1] Thompson, Wood, and Honeyman believe that money makes a difference.[2] Education for children will be impacted negatively if educators neglect the importance of adequate and equitable resources.[3] Fiscal equity and the allocation of scarce resources have been issues in public education for many years. Findings from a New York study in 1921 by Professors George D. Strayer and Robert M. Haig determined that there existed for many years a movement for equalization of educational opportunity that called for the state to ensure equal educational facilities to every child.[4] The first formal research on the subject of school finance was the 1906 doctoral dissertation of Ellwood P. Cubberley who concluded,

> In the first place, I have conceived of a state system of schools instead of a series of local systems. Without such a conception no equalization of either the burdens or the advantages of education is possible . . . maintenance of

---

[1] D. C. Thompson, R. C. Wood, and D. S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices. White Plains, NY: Longman Publishing Group, 1993, 7.

[2] Ibid., xi.

[3] Ibid., xi.

[4] T. H. Jones, Introduction to School Finance. New York: Macmillan Publishing Company, 1985, 199.

> schools is in part for the common good of all and hence should be . . . in part assumed by the state as a whole.[5]

Ongoing concerns about public education continue with the increasing costs of educational services and increasing dissatisfaction with a public education system which was once well respected.[6] Society's wants have historically exceeded the means available.[7] Taxpayers believe public education is a bureaucracy responsible for excessive tax burdens and hardships on public resources.[8] For the good of society education has provided for substantial progress and economic development of this country,[9] but concerns about fiscal equity and the allocation of resources are still discussed and researched.

Researchers, politicians, and practitioners have worked to identify ways to promote equity in funding for public education. These efforts have been substantially successful with state and local funding within the Florida Education Finance Program giving Florida one of the most equitable finance formulas for education funding in the nation.[10] Research into school finance is pursued primarily to enlighten and educate a highly uncertain political environment. School finance researchers strive to understand, explain, and predict school finance alternatives and to impact the future.[11] Equity in the allocation of educational resources is a visibly important issue.

---

[5] E. P. Cubberly, School Funds and Their Apportionment. New York: Columbia University, 1906, 52.

[6] P. E. Burrup and V. Brimley, Jr., Financing Education in a Climate of Change. New York, NY: Allyn and Bacon, 1-2.

[7] Ibid., 3.

[8] Ibid., 2.

[9] Ibid., 2.

[10] Florida Education Finance Program Review Panel, Presentation by Dr. David S. Honeyman, Professor University of Florida, January 10, 1994, Tallahassee, FL.

The original Florida Education Finance Program (FEFP), as enacted by the 1973 legislature, contained language expressing legislative intent to ensure each Florida public school student the availability of appropriate educational programs and services substantially equal to those available to any similar student regardless of geographic differences and varying local economic factors.[12] The Florida Education Finance Program (FEFP) funding formula incorporates a combination of state and local funds. School districts in Florida in 1994-95 received 49.6 percent of their financial support from state sources and 42.2 percent from local sources including the required local effort portion of the FEFP.[13]

Funding for the Florida Education Finance Program from state sources is provided primarily by legislative appropriations funded by the state general revenue fund. The major proportion of state support is distributed through provision of the FEFP. In 1994-95, more than $4.8 billion dollars were appropriated from the State General Revenue Fund funded primarily by sales tax collections. Other appropriations include proceeds from the Florida Lottery which were used to fund $502 million dollars for Discretionary Lottery Funds, $104 million dollars in Pre-School Programs, and $56 million dollars for School Technology funding.[14]

---

[11] Jones, 1985.

[12] Florida Statute 236.012(1).

[13] Department of Education, 1994-95 Florida Education Finance Program Statistical Report, EIAS Series 95-3, July 1994, p. 1.

In addition to state funding for the day-to-day operations of the districts in the general fund, state funding to districts for capital outlay needs is provided for in the Florida Constitution.[15] State funding for capital outlay needs are from the Capital Outlay and Debt Service (CO&DS) program which is funded from the proceeds of licensing motor vehicles and the Public Education Capital Outlay (PECO) program which is funded from the proceeds from gross utilities taxes as provided by legislative allocation. Revenues from the state for capital outlay needs are generally accounted for in the Capital Outlay Funds of the districts.[16]

In addition to state support for capital outlay needs, local revenues are also utilized. Local revenue for school support, both operations and capital outlay, are almost entirely from property taxes. Each of the sixty-seven districts in Florida must levy the millage set for its required local effort taxes by the legislature if the district wants to participate in the FEFP. For 1994-95 the required local effort taxes levied by the legislature exceeded $3.2 billion dollars with each district's share determined by statute.[17] Revenue from the required local effort portion of the funding formula are generally expended for operations and accounted for in the general fund.[18]

---

[14] Ibid.

[15] Florida Constitution, Article XII, Section 9(d); Article XII, Section 9(a)(2).

[16] Department of Education, Financial and Program Cost Accounting and Reporting for Florida Schools (1994). Tallahassee, FL: 1-1.

In addition to the required local effort millages, the legislature also established the ceiling on the discretionary millage school boards are permitted to levy for general operations of the districts. For 1994-95 the discretionary millage was established with a maximum of 0.51 mills per district.[19] Funds generated by this millage are from primarily local property taxes and are generally accounted for in the general fund.[20] Discretionary millage levied generated varying amounts of revenue depending on the district tax base. Funds from this source are not equalized statewide.

In addition to the 0.51 discretionary mills, the 1994 legislature authorized local school boards to levy an additional 0.25 supplemental discretionary millage for operations.[21] This 0.25 mill supplemental discretionary millage levy was required in total and was equalized to

---

[17] Florida Statute 236.081(4).

[18] Department of Education, Financial and Program Cost Accounting and Reporting for Florida Schools, 1-1.

[19] Department of Education, 1994-95 Florida Education Finance Program, Statistical Report, 3.

[20] Department of Education, Financial and Program Cost Accounting and Reporting for Florida Schools, 1-1.

[21] Department of Education, 1994-95 Florida Education Finance Program, Statistical Report, 3.

$50 per student. For example, a school district whose 0.25 mill supplemental discretionary millage levy only generated $34 from local sources per student received an additional $16 from state sources for a total of $50 per student.[22]

In addition to the discretionary millage for current operations, the legislature established a discretionary capital improvement tax. School boards are permitted to levy up to two mills of discretionary capital improvement tax for capital outlay and maintenance.[23] Expenditure of the proceeds from the capital improvement tax levy are permitted for new construction and remodeling, sites and site improvement or expansion of new sites, existing sites, auxiliary or ancillary facilities; maintenance, renovation, and repair of existing school plants or of leased facilities to correct deficiencies; purchase of new and replacement equipment, school buses, driver education vehicles, security vehicles, and vehicles used for maintenance or operation of plants and equipment or in storing or distributing materials and equipment; payment for lease-purchase agreements for educational facilities and sites, payment for Section 237.161 and 237.162 loans, payment of costs related to compliance with state and federal environmental regulations, and payment of costs of leasing relocatable educational facilities; and instructional materials.[24]

---

[22] Ibid.

[23] Florida Statute 236.25(2).

[24] Florida Statutes 236.25, 235.435(3(b).

Although the Florida Education Finance Program funding formula has been a model for many states across the nation, efforts to provide for equalization of funding among the districts in the state have not been totally successful. Legislatively permissive flexibility to transfer capital outlay fund dollars to the general fund for operations has resulted in a system of education funding that has allowed for disequalization of resources among districts.

There is a prevailing school of thought that education in Florida is moving toward a crisis situation with top-down mandates increasing and state general revenue funding spread too thin. Thompson, Wood, and Honeyman believe that forced choice is apparent in deferred capital improvements and maintenance as a result of districts being forced to choose between spending for programs for students and spending for facilities.[25] Analysis of education funding shows an erosion of the state general revenue dollars available for providing an adequate and substantially uniform educational opportunity for each student in Florida. It is important to note that for the 1994-95 fiscal year, funding per student in Florida is close to the 1990-91 level of funding and the portion of state general revenue funding for education has decreased.

When making appropriations for the 1991-92 fiscal year, the legislature found that the cost to fund student growth exceeded projected revenue increases, which necessitated a lower allocation per student statewide than had been available in 1990-91. This deficiency led to required cutbacks in services by many districts. In an effort to avoid disproportionate amounts of cutbacks in some districts, the legislature determined that the total operating dollars per student from state and local sources for each district should be reduced by an equal percentage. This was done through establishment of a funding adjustment which, after calculation of the funding formula, either added to or subtracted from the allocation to each district in order to achieve a pro rata change in the funding formula. The 1991 legislative session produced an inadequate education budget equal in deficiencies to the 1990-91 education budget after budget cuts.[26] This deficient budget left Florida education with less money to serve approximately 100,000 new students, provide for increased operating costs, meet demands for increased teacher salaries, and satisfy increased demands for accountability and improved student performance.[27]

---

[25] Thompson, Wood and Honeyman, 550.

The 1992 legislature imposed a funding adjustment which was again utilized to reduce the total dollars available per student in 1992-93 by an equal percentage. The funding adjustment equalized the per student funding in 1992-93 at a .014% decrease in funding from the previous year. Thus, for the fiscal years 1991-92 and 1992-93, education funding in Florida declined with funding changes equalized to lessen the impact of the decrease on any one district.

---

[26] C. E. Ferrell, Florida's Education Lottery: Deception of Design, Seminole County School Board Report, 1990.

[27] W. Blanton, F. Darden and J. Mee (1991) Florida School Boards Association, Boarder-Line, May 31, 1991, 2.

Education appropriations for fiscal year 1993-94 again included a hold harmless concept to provide for a minimum level of funding. The funding adjustment to hold harmless ensured that every district receive at least a minimum 2.937% increase in funding per student. States have usually focused on equalizing funding at a minimum level. As the state provides more aid, the relative impact of disparities in wealth decreases, but the resources available to certain school districts will only provide for a minimal educational program.[28]

Education funding for fiscal year 1994-95 included a hold harmless adjustment that ensured each district a minimum 2.55% increase in per student funding. The calculation includes state FEFP, major categorical funds, discretionary lottery funds, required local effort tax proceeds, and a portion of discretionary tax proceeds.[29]

Funding adjustments were used to equalize per student funding downward in each district by an equivalent amount. Recent education funding included a hold harmless provision used to provide a minimum guarantee of a funding increase. The concept of leveling downward has been utilized in states struggling with the wealth neutrality issue which becomes less of an issue when funding is at an adequate level. State efforts for reform are commendable but can do more harm than good if not adequately funded.[30] Inadequate funding is hard to overcome with limited resources and unlimited needs.[31]

---

[28] R. L. Johns, K. Alexander, and K. J. Jordan Financing Education: Fiscal and Legal Alternatives. Columbus, Ohio: Merrill (1972).

[29] Department of Education, 1994 Review of the Legislature: A Summary of Legislative Actions Affecting Florida Public Schools, Tallahassee, Florida.

In addition, situations of increased revenues and shortfalls have become widespread, and information on adequate revenue for education is confusing and leads to resentments and frustrations.[32] Meeting the specialized needs of today's diverse students is more than a challenge. As the demographics of society change, so do those of students. The educational implications of the today's students point toward specialized needs. Growth in the numbers of special needs students continues to grow with broadened categories of special needs. Instructional methods must be diversified to meet a variety of needs resulting from cultural diversity and social challenges that influence a child's environment. Schools need to acknowledge and embrace a changed mission to meet student needs.[33]

An additional source of funding is the Florida Lottery. The citizens of Florida successfully placed an initiative on the ballot for a constitutional amendment to create a lottery for education. The voters then approved the constitutional amendment to create the lottery for education with the expressed intent for the proceeds of the lottery to enhance funding for education.

---

[30] Thompson, Wood and Honeyman, 62.

[31] Ibid., 62.

[32] Ibid., 56.

[33] Ibid., 62.

Studies have shown that lottery proceeds are not being used to enhance education as was the original intent.[34] At the time the lottery was started, education's share of the state general revenue was approximately 60 percent. That percentage of the share has steadily declined to less than 50 percent in 1994-95. As proceeds from the lottery increased to education, state funding from general revenue appropriated by the Legislature decreased proportionately. The evidence in Stark's study indicated that lottery funds were used to replace general revenue funds on a dollar for dollar basis. Revenue from the lottery supplants state general revenue. General fund revenue previously allocated to education was subsequently allocated to other state agencies such as prisons. This supplanting was not the intent.

Another revenue source that is not used as originally intended is the capital outlay funding. State law allows districts the flexibility to transfer capital outlay dollars from the two mill Capital Improvement

---

[34] S. Stark, C. Wood, and D. S. Honeyman, The Florida Education Lottery: Its Use as a Substitute for Existing Funds and its Effects on the Equity of School Funding, Journal of Education Finance (Winter 1993), vol. 18, 3:231-242; S. R. Summer, D. S. Honeyman, J. L. Wattenbarger and M. D. Miller, An Examination of Supplantation and Redistribution Effects of Lottery Allocations to a Community College System, Journal of Education Finance (Fall 1995), vol. 21, 2:236-253; S. R. Summers, M. D. Miller, and D. S. Honeyman, The Florida Education Lottery: A Lotto Nonsense or a Wise Bet for Florida’s Community Colleges? The Journal of Applied Research for the Florida Association of Community Colleges (Winter 1995), 28-32; and S. Stark, An Examination of the Florida Education Lottery, Occasional Paper No. 3, September, 1991, Gainesville, FL: University of Florida, and UCEA Center for Education Finance, 3.

Tax levy to the general fund for school district operations.[35] While this provided a much needed source of revenue for certain districts, other districts utilized capital improvement tax dollars for the intended purpose of capital improvement such as building and renovation. Districts have also utilized state Public Education Capital Outlay (PECO) maintenance dollars to supplant general fund maintenance funding. In 1994-95 districts statewide have transferred $350 million in capital improvement tax funds and PECO maintenance funds from the capital Outlay fund to the general fund. Government regulations and unfunded mandates have created challenges for many school boards and resulted in a redirection of funds from inadequate maintenance budgets.[36] This flexibility created inconsistencies in the equalization intent of the Florida Education Finance Program (FEFP) and disequalized the funding of Florida schools when districts levied and transferred the potential discretionary two mill capital improvement tax levy and the Public Education Capital Outlay dollars. Legislation permitting the expenditure of capital outlay dollars for non-capital purposes is similar to using education lottery dollars for non-enhancement purposes. Such practices are recognition of the need for solutions to a major funding problem.

---

[35] Florida Statute 236.25(2).

[36] J. Agron, Putting Together The Puzzle-Why schools need $112 billion to repair buildings and what they can do about it, American School and University, June 1995, 24.

Transfer and utilization of capital outlay funds for operating purposes is not the solution for education's funding situation. A General Accounting Office (GAO) study reports that the nation's schools need about $112 billion to repair or upgrade America's multibillion dollar investment in facilities.[37] Honeyman estimated a cost of about $230 billion to bring existing buildings up to an acceptable level.[38] Transfers out of capital outlay funds make it more difficult to meet school district capital outlay needs.

A Florida Facilities Task Force projected major shortfalls in capital outlay funding. The task force projected the average annual shortfall in capital outlay funding for Florida school districts for 1989 through 1994 as $240.8 million dollars annually, and the average annual shortfall for 1995 through 1999 as $141.7 million dollars annually, with a ten-year unmet need of nearly $2 billion dollars.[39]

---

[37] School Facilities: Condition of America's Schools (GAO/HEHS-95-61), February 1995.

[38] D. Honeyman, A Report on Educational Facilities, Developments in School Finance, W. J. Fowler, Jr., ed. (January 1995), Washington, DC: U. S. Department of Education: 39-50; D. S. Honeyman, Finances and the Problems of America's School Buildings, The Clearing House (November/ December 1994), vol. 68, 2:95-97; D. S. Honeyman, School Facilities and State Mechanisms that Support School Construction: A Report from the Fifty States, Journal of Education Finance (Fall 1990), vol. 16, 2:247-272; and B. Wagner and S. J. Hedges, Education in Decay: Burdened by Bureaucracy, The Nation's Schoolhouses are Crumbling, U. S. News and World Report, September 1994, 26.

[39] Report to the Commissioner: Facilities Task Force, Florida Department of Education: Office of Educational Facilities, Tallahassee, FL (February 1990), 16.

Statement of the Purpose

The purpose of this research was to extend equity analysis to include capital outlay fund transfers made to the general fund for educational expenditures for operations. It includes analysis of the equity of the Florida Education Finance Program revenue in the general fund before capital outlay transfers and an analysis of the impact of capital outlay fund transfers on the equity of the total educational revenue for operations in the general fund.

This research will provide the answer to the following question:

What were the effects on the relationship of the equity among Florida school districts of total general fund educational revenue after capital outlay transfers from capital outlay funds to the general fund for the most recent year data were available (1994-95) in Florida?

Objective

A major objective of this study was to apply equity theory and evaluative methodology to concerns with general fund educational revenue along with the impact of the transfer of capital outlay funds to general fund revenue. Florida was chosen as the source of data for this analysis because of the impact capital outlay transfers to the general fund have on the capital outlay funds when insufficient capital outlay revenue is available and because of Florida's attempts to provide an equitable formula for education funding.[40] This study compared the equity of general fund revenue before and after the transfers of capital outlay revenues for fiscal year 1994-95.

Significance of this Study

Attention nationwide has focused on education funding. This study was intended to make a contribution to the understanding of fiscal equity in education funding. This study provided knowledge on the impact transfers of dollars from one fund source to another had on the fiscal equity of education funding in Florida, a state whose finance system is considered one of the most equitable in the nation.[41]

The importance of the situation was that the transfers from the capital outlay fund to the general fund came at a time when statewide capital outlay needs were not being met.[42] In 1994-95 projected revenue needs for capital outlay for public school districts statewide were $1.6 billion dollars.[43] The 1994-95 revenue available for capital outlay purposes was $1.3 billion.[44] Of the $1.3 billion available for capital expenditure from the capital outlay funds statewide, $350 million (27 percent of capital outlay revenue) was for transfers from the capital outlay fund to the general fund.[45] Consequently, the impact of the transfers was important to the capital outlay funds and construction and renovation of schools in Florida as well as the fiscal equity of education funding.

---

[40] Report to the Commissioner, 16.

[41] T. E. Cochrane, History of Public Education in Florida, Lancaster, PA; The New Era Publishing Company, 1922, 12: Cited in L.A. Shiver, A Historical Review of the Development of Florida's School Finance Plan and the Fiscal Equalization Effects of the Florida Education Finance Program, (Doctoral Dissertation, University of Florida, 1982), 22.

[42] Report to the Commissioner, 16.

[43] Ibid.

[44] Ibid.

Limitations of the Study

This study did not address the adequacy of education funding. The focus of this study was the equity of the resources that are available for expenditure in the general fund both before and after the capital outlay transfers. The scope of this study included a focus on the statewide equity of the allocation of funds per student per district and does not focus on taxpayer equity. This study was limited to the state of Florida and fiscal year 1994-95.

Overview of the Methodology

The state of Florida chosen for this study has a foundation distribution system of funding for education. This study was compiled from data from the Florida Education Finance Program (FEFP) for fiscal year 1994-95. The FEFP included an equalized formula of state and local funding and unequalized discretionary millages for operations and capital outlay. Mean revenue per weighted FTE from each district as reported on the 1994-95 Florida Education Finance Program was used to analyze the equity of the operating revenue both before and after discretionary capital outlay fund transfers obtained from the District Summary Budgets.

---

[45] Department of Education, District Annual Budget Summaries, 1994.

Definitions

Capital Improvement Tax - Capital Improvement Tax levy is a local discretionary tax levy not to exceed a maximum of two mills against the nonexempt assessed valuation for school purposes to fund new construction and remodeling, maintenance, renovation of facilities, the purchase of school buses and vehicles, new and replacement equipment, and the repayment of certain loans and lease payments.[46]

Capital Outlay - Capital outlay is revenue for the purpose of improving or purchasing fixed assets, including buildings, land, and equipment.[47]

Capital Outlay Fund - The Capital Outlay Fund is a fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources together with all related liabilities and residual equities or balances segregated for the purpose of carrying on activities specific to capital outlay.[48]

Florida Education Finance Program (FEFP) - Since 1973, the Florida Education Finance Program has been the funding mechanism for public schools in Florida. The intent of the law is to guarantee each student in the Florida public school system the availability of substantially equal programs and services appropriate to his educational needs regardless of geographic differences and varying local economic factors.[49]

---

[46] Florida Statute 236.25(2).

[47] Department of Education, Financial and Program Cost Accounting and Reporting for Florida Schools, 3-3.

[48] Ibid.

General Fund - The General Fund is a fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources, together with all related liabilities and residual equities or balances segregated for the purpose of carrying on activities of general business not accounted for in other funds.[50]

Weighted FTE - Weighted FTE is the sum of the products of the full time equivalent students and the weight assigned to each based on extra program expenses required by special student characteristics of that weighting class to which the student has been assigned.[51]

Summary

Equity in providing educational services to children demands attention. The transfer of capital outlay funds is an important variable in educational funding. Flexibility in capital outlay transfers to the general fund decreased the equability of educational revenue for the operation of public schools.

---

[49] Department of Education, 1994-95 Florida Education Finance Program, Statistical Report, 1.

[50] Department of Education, Financial and Program Cost Accounting and Reporting for Florida Schools, 1-1.

[51] Department of Education, 1994-95 Florida Education Finance Program, Statistical Report, 12.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

There is extensive literature relating to the fiscal equity of educational resources. This literature includes the history of fiscal equity, state fiscal equity funding methodologies, and a review of selected legislation relating to fiscal equity.

Principles of School Funding Equity

Ellwood P. Cubberly asserted in his 1906 dissertation that it was a state responsibility to assure a minimum level of education and equalization of educational opportunities. Cubberly believed that all children within a state had a right to the same educational opportunities.[1]

In 1923, George D. Strayer and Robert M. Haig developed the concept of a minimum educational foundation for funding education.[2] Strayer and Haig believed that a minimum educational foundation for education has three elements: (1) establishment of schools that were adequate to assure a prescribed minimum educational opportunity for each child in the state, (2) tax levies for educational purposes based on taxpayers ability to pay, and (3) a statewide oversight of the schools by a state education department.[3]

---

[1] E. P. Cubberly, School Funds and Their Apportionment New York: Columbia University, 1906.

[2] G. D. Strayer and R. M. Haig, The Financing of Education in the State of New York, vol. 1, New York: Macmillan, 1923, 57.

In The Measurement of Educational Need, Paul R. Mort furthered the concept of educational opportunity equalization and educational need.[4] Mort believed that the measure of cost for an educational opportunity approximated the measure of educational need.[5] He believed that the overall educational needs of the community influenced the cost of educational programs provided at a satisfactory minimum level of educational opportunities.[6] Satisfactory minimum educational opportunity was regarded as satisfactory educational equalization.

According to Mort, three components were required for a satisfactory educational equalization program. These three components together represented a measure of educational cost which translated educational needs. Mort's three components were (1) common educational activities; (2) unusual costs for special needs; and (3) extraordinary costs for special conditions.[7]

---

[3] Ibid., 174.

[4] P. R. Mort, The Measurement of Educational Need New York: Teachers College, Columbia University, 1924, 69.

[5] Ibid., 6.

[6] Ibid., 1.

[7] Ibid., 6-7.

Roe L. Johns and Edgar L. Morphet expanded the idea of the equalization of educational opportunity considering educational need. Johns and Morphet identified additional variables that impacted costs of various educational opportunities including costs attributed to factors such as population density and sparsity.[8]

These early researchers established the concept of considering educational need for equalization of educational opportunity. This concept recognized that varying educational needs, depending upon varying needs of children and expectations of communities, impacted the costs of delivering educational services. Provision for equalization of educational opportunities among communities was the responsibility of the state legislature through funding of their school finance funding formulas.

Educational need was determined by unique characteristics of the local communities which differentiated their eligibility for state aid. States determined educational needs in a variety of ways. Considerations were student related such as students with special needs, school related needs such as differing size and locations, and program needs.[9]

---

[8] R. L. Johns and E. L. Morphet, The Economics Financing of Education, 3d ed. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1975), 234.

[9] T. H. Jones, Introduction to School Finance, 142.

Recent studies of school finance incorporated the economics of education. School finance and economics of education are based primarily on economics and public finance.[10]

Educational leaders were interested in other issues of education funding such an adequacy and efficiency, but the primary emphasis on research has been on equity.[11]

> The goal of school finance that is labeled equity is more commonly expressed as equality of educational opportunity. This expression recognizes that it is not possible to educate all students to the same level, for they have different preferences an innate abilities. There are many possible definitions of equal educational opportunity, but in practice the concept has been limited to mean assuring equal dollars per student or assuring enough money to provide comparable programs for students when their different needs and the cost of providing them have been taken into account.[12]

Equity principles are used to determine the fairness of a state finance system. Researchers use three principles to measure the equity of fiscal resources for education: horizontal equity, vertical equity, and fiscal neutrality.

---

[10] J. N. Fox, "School Finance and the Economics of Education: An Essay Review of Major Works," Educational Evaluation and Policy Analysis (Spring 1989), 70; R. A. Musgrave, The Theory of Public Finance New York: McGraw-Hill Book Company, 1959; R. A. Musgrave and P. B. Musgrave, Public Finance in Theory and Practice, 5th ed. New York: McGraw-Hill Book Company, 1989; J. A. Maxwell and J. R. Aronson, Financing State and Local Government, 3d ed. Washington, DC: The Brookings Institute, 1977.

[11] W. I. Garms, J. W. Guthrie, and L. Pierce, School Finance: The Economics and Politics of Public Education, 2d ed. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1988, 130.

[12] Ibid.

The principle of horizontal equity is the equal treatment of equals. Horizontal equity means that students who are equal should receive equal shares. Horizontal equity is determined by the dispersion in the distribution of the shares, such as resource inputs.[13] The difficulty with horizontal equity is determining which students are equal. Equal students are required to receive the same share of the resources distributed for horizontal equity.[14]

The principle of vertical equity is the unequal treatment of unequals. Vertical equity recognizes that different students should be treated differently and receive unequal shares of the resources distributed. Differences include student related variables, school related variables, and program related variables.[15]

Fiscal neutrality, the third principle, recognizes that shares of educational resources should not be a function of local wealth.[16] It is widely accepted that equity requires fiscal neutrality.[17]

Thompson, Wood, and Honeyman divided equity into the two issues, equity for students and equity for taxpayers.[18] Studies of equity target these two groups, students using educational services and taxpayers funding the delivery of educational services.[19]

---

[13] Thompson, Wood, and Honeyman, 179.

[14] D. H. Monk, Educational Finance: An Economic Approach New York: McGraw-Hill Publishing Company, 1990) 44.

[15] Berne and Stiefel, The Measurement of Equity, 13.

[16] Ibid., 17; J. E. Coons, W. Clune, and S. D. Sugarman, Private Wealth and Public Education Cambridge, MA: Harvard University Press, 1970, 72.

[17] S. J. Carroll and R. E. Park, The Search for Equity in School Finance Cambridge, MA: The Ballinger Press, 1983, 29.

[18] Thompson, Wood, and Honeyman, 57, 58.

Taxpayer equity is concerned with both horizontal and vertical equity. Taxpayers in the same financial position should pay the same amount for horizontal equity. Taxpayers in different financial positions should pay different amounts for vertical equity.[20] Taxpayer equity issues are complex. Berne and Stiefel believe that there are multiple formulations of taxpayer equity in school finance. There are cases where taxpayer equity is equated with an ambiguous formulation such as equal tax rates, a formulation that is equitable only by definition. Less ambiguous formulations such as equal yield for equal effort are utilized without reference to other equally plausible ones.[21]

> Although equity is not always easy to attain in school finance formulas, its common and accepted usage requires that it provide for equal treatment of equals--its horizontal component; and fair and reasonable, but unequal, treatment of unequals--its vertical dimension.[22]

---

[19] Burrup and Brimley, Financing Education in a Climate of Change. Boston, MA: Allyn and Bacon, 1982, 58.

[20] T. H. Jones, Introduction to School Finance: Technique and Social Policy. New York: Mcmillan Publishing Company, 1985, 56-57.

[21] R. Berne and L. Stiefel, "Taxpayer Equity in School Finance Reform: The School Finance and the Public Finance Perspectives," Journal of Education Finance, Vol. 5, No. 1 (Summer 1979), 37.

[22] Burrup and Brimley, Financing Education in a Climate of Change. Boston, MA: Allyn and Bacon, Inc., 1982, 56.

Taxpayer equity is difficult to achieve in a finance formula, but taxes should be paid according to taxpayers ability to pay.[23]

In Berne and Steifel's study, equity was determined by inputs per student. Inputs were the resources used to educate students. These inputs were measured either in actual physical resources such as books and teachers, in dollars, or in price adjusted dollars.[24] The current study of the impact on equity of capital outlay fund transfers used revenues per students as inputs. The prevalent input used in studies of state school finance formulas are dollar measures either as revenues or expenditures.[25]

History of Equity

Prior to 1845, the state's primary emphasis for education was on education of the poor.[26] Wealthy citizens with adequate means sent their children to private schools while the poor children were the primary recipients of public education.[27] The primary funding source for operation of the few common schools operating at that time was the 1785 Northwest Ordinance. This ordinance, along with the subsequent acts of the United States Congress, directed that the sixteenth sections of all territories be reserved for the common schools with authorization for the Territorial Councils to lease these sections. For the four years the act was in force, five sections were leased for common schools generating $101.50.[28]

---

[23] Ibid., 56.

[24] Berne and Stiefel, The Measurement of Equity in School Finance, 9.

[25] Ibid., 10.

[26] A. D. Pollock, The Evolution of the Organizational Structure of Local Public Education in Florida 1945-47. Doctoral Dissertation, Florida State University, 1969, 13.

[27] T. E. Cochrane, History of Public Education in Florida, Lancaster, PA: The New Era Publishing Company, 1922, 12, cited in L. A. Shiver, A Historical Review of the Development of Florida's School Finance Plan and the Fiscal Equalization Effects of the Florida

Funds for education were also generated through fines for trespassing on school lands, auction duties, rental fees from public properties, revenues from escheated lands and surplus moneys from the United States Treasury.[29] No records documenting the amount of money used for the support of schools appears to exist. Consequently there is no way to determine if equitable distribution of funds was a consideration during this time.[30]

Adequate financing of schools became an issue for the state soon after Florida became a state in 1845. Shiver discussed correspondence by Franklin to the Floridian.[31] Franklin maintained that the then current system of funding education of Florida schools was ineffective

---

Education Finance Program, Doctoral Dissertation, University of Florida, 1982, 22.

[28] Cochrane, 6.

[29] Shiver, 26-27.

[30] Cochrane, 9.

[31] Franklin, "Public Education--No. 5," The Floridian, Tallahassee, October 17, 1846, p. 2, cited in Shiver, Historical Review, 29-31.

and inadequate. In addition to advocating a broader base of revenues and state consolidation of education, Franklin made citizens aware of inequities in the funds that could be generated at the district level because of disparities in the wealth of the local school districts. Franklin's observation shows an early interest in the equalization of educational opportunity in the state through the consolidation of state education funds.[32]

The Florida Legislature's Florida School Law of 1849 had little impact on the funding of education in the state, but a later amendment to the law in 1851 had a provision that attempted to address both adequacy and equity for education funding.[33] This law provided Florida's first equalization system for state support. It mandated the legislature to provide state funding in the amount of two dollars annually for the education of each child if the local school district was unable to generate that level of funding for support of schools.[34] The School Law of 1853 also addressed the issue of equitable funding by mandating to the state to fund schools according to the number of students residing in the district rather than by the number of students in the district attending schools.[35] Although these laws attempted to address the equity of school fund distribution, the adequacy of funding during this time was insufficient to meet the most basic needs of the school districts. The problem of inadequate funding was further compounded during the Civil War when all education funds were diverted to the war effort and the schools were closed.[36]

---

[32] N. K. Pyburn, Documentary History of Education in Florida 1822-1860. Tallahassee, FL: Florida State University Press, 1951, 52.

[33] Shiver, 31-34.

[34] Laws of Florida (1851), Chapter 343, p. 104 cited in Pyburn, 56.

[35] Shiver, 37.

School legislation between the end of the Civil War and the early 1900s was concerned with the generation of funds to support the schools.[37] In 1893 the legislature passed an act which required state aid for education to be distributed to the districts in proportion to the average attendance in each district.[38] The effect of this act on equalization of educational opportunity for education in the state was similar to the School Law of 1853.[39]

State Superintendent of Schools W. S. Cawthon noted in a 1924 report to the governor that the unequal distribution of wealth between districts made it virtually impossible for the poorer school districts to maintain their schools without additional state aid.[40] The legislature believed that the aggregate daily attendance was a better method of calculation for equalization of the distribution of school funds than the average daily attendance method. Johns subsequently found aggregate daily attendance methods to be more disequalizing than equalizing. The provision was later declared unconstitutional and the apportionment again based on average daily attendance.[41]

---

[36] Ibid., 39.

[37] Ibid., 37-46.

[38] Ibid., 47.

[39] Cochrane, 200.

[40] Shiver, Historical Review, 53.

The state legislature in 1927 again addressed the adequacy and equity of school funding by increasing state property tax and levying a one cent per gallon gasoline tax with the proceeds earmarked for education. The legislature appropriated the funds generated with one half cent distributed to the districts on the basis of average daily attendance and the other half cent apportioned to address equity concerns. The funds generated by the new taxes were insufficient to provide adequate funding for the poorer districts to remain open for the minimum 120 day term required by state statute.[42]

In 1929 an educational survey team was commissioned by the legislature to investigate the continuing problems associated with funding Florida schools. The team, led by George Strayer, determined that the primary source of inequities in the state was caused by the way the Florida school districts were determined.[43] The commission found inequity in the distribution of funds with the primary reason for inequity the constitutional requirement that funds be expended in the districts in which they were generated.[44] Strayer's commission made numerous recommendations to address equity, but the recommendations were not acted upon by the legislature for close to 20 years.[45]

---

[41] R. L. Johns, The Evolution of the Equalization of Educational Opportunity in Florida 1926 to 1976. Gainesville, FL: Institute for Education Finance, 1976, 41-42.

[42] Ibid., 38-39.

[43] Pollock, 94.

In 1939, the Florida School Code was implemented as a mechanism to equalize school funding. This comprehensive change in funding method provided for an equalizing fund because it supplied aid for smaller schools in somewhat greater proportion than for larger schools.[46]

In 1945, the Legislature created the State Foundation Fund to help alleviate the educational inequities created by the differences in wealth among the school districts in the state. The State Foundation Fund provided for equal educational advantages considering the educational needs of the students and the tax paying ability of the counties. By 1947, the State Foundation Fund became the Minimum Foundation Program Law.[47]

The Minimum Foundation Program (MFP) evolved for many reasons. Florida's education system was in critical financial condition. The Florida Citizens Committee on Education, a group of finance experts appointed by the governor, recognized the problem and recommended reform, and the Legislature was under political pressure to respond.[48]

---

[44] Johns, 34-35.

[45] Ibid., 45.

[46] Shiver, Historical Review, 62.

[47] Shiver, 64-65.

[48] Shiver, 65-66.

The MFP, developed by Roe L. Johns from the University of Florida and Edgar Morphet from the Florida Department of Education, was a budgetary system with varying allocations depending upon the school population, the professional training levels of instructional staff, and provisions for exceptional student education, adult and vocational education, summer programs, supervision and administrative services, and guidance services.[49] Two provisions of the Minimum Foundation Program were particularly equalizing. One equalizing provision redistricted the schools along county lines and required the funds generated within a county to be used for all the schools within that county.[50] Another equalizing provision was the required local effort. Required local effort was calculated by determining the county's portion of the total state assessed property value then multiplying the value by the yield of a six mill tax on all nonexempt property in the state. This required local effort number was then subtracted from the state calculated cost of the minimum foundation program for the district. The difference in funds needed to provide the minimum foundation level of funding was provided as state aid to the county. This calculation substantially equalized the funding distribution in Florida and immediately influenced the quality of education.[51]

---

[49] R. L. Johns, "State Financing of Elementary and Secondary Education," in Education in the States: Nationwide Development Since 1900. Washington, DC: National Education Association of the United States, 1969, 196.

[50] J. W. Seay, "Florida," in Education in the States: Nationwide Development Since 1900. Washington, DC: National Education Association of the United States, 1969, 244.

Selected Equity Cases

Each state constitution is different. Litigation of state school finance relies on the state equal protection clauses and articles.[52] Cases have been pursued in many ways depending upon the emphasis in the state constitution.[53] Wood and Thompson have analyzed the early finance litigation cases and concluded that the most favorable venue for plaintiffs is the state courts where they can rely on state constitution language.[54]

Disparity of funding among school districts has been at issue. Disparities in funding result from formulas which derive funding from local districts. School districts in wealthy communities with high tax bases generate more revenue than districts in communities with lower tax bases.[55]

---

[51] Shiver, 69-70.

[52] W. E. Thro, "The Third Wave: The Impact of the Montana, Kentucky, and Texas Decisions on the Future of Public School Reform Litigation," Journal of Law and Education 19 (Spring 1990): 1641-1642.

[53] W. E. Sparkman, "School Finance Challenges in State Courts", in The Impacts of Litigation and Legislation on Public School Finance: Adequacy, Equity and Excellence, Julie K. Underwood and Deborah A. Verstegen. New York: Harper and Row Publishers, 1990, 193-194.

[54] R. C. Wood and D. C. Thompson, Educational Finance Law: Constitutional Challenges to State Aid Plans - An Analysis of Strategies. Topeka: 1993, 71.

[55] Thro, 1647-1649.

The common theory behind state school finance litigation is the assumption of a direct correlation between school expenditures and the quality and quantity of student educational opportunity. Disparities depriving students of equal educational opportunities can be perceived as denying equal protection of the law to all students. Cases are generally based on the education article of the state constitution and assert that the state has an obligation to provide a certain level of education. Also depending upon the emphasis in the state constitution, cases claim that funding disparities among districts should be subject to strict scrutiny under the state equal protection analysis.[56]

In 1971, The Supreme Court of California was the first state high court to strike down a school funding plan. In Serrano v. Priest the court declared that the state education plan could not be a function of local property wealth.[57] With this decision, based on the equal protection guarantees of the state and federal constitutions, the concept of wealth neutrality was established for the state of California.[58] Fiscal neutrality requires that distribution of education funds not be a function of local school district wealth. The California Court revisited the issue in 1976 in Serrano II.[59] The recommendation was prompted by the United States Supreme Court decision in San Antonio Independent School District v. Rodriguez[60] as well as allegations that the state legislature had failed to adequately address the school financing issue.[61] Based on state constitutional grounds, wealth neutrality was upheld in 1976 when the court reviewed Serrano II[62] considering the U.S. Supreme Court's decision in San Antonio v. Rodriguez which denied federal equal protection claims.[63] The court acknowledged a cost-quality relationship by asserting "equality of educational opportunity requires that all school districts possess an equal ability in terms of revenue to provide students with substantially equal opportunities for learning".[64] The decision in Serrano II was based on wealth neutrality using the cost-quality concept. This created the standard for assessing the equity of state finance programs as student equity.[65]

---

[56] Sparkman, 198-199.

[57] Serrano v. Priest(1971), 487 P.2d 1241 (Cal. 1971).

[58] Thro, 1650-1651.

[59] Serrano v. Priest, 557 P.2d 929 (Cal. 1976) [hereinafter Serrano II].

Wise defined student equity as "the provision of equal resources or equivalent services to the children of the state."[66] Burrup and

---

[60] San Antonio Independent School District V. Rodriguez, 411 U.S. 1, rehearing denied, 411 U.S. 959 (1973).

[61] Wood and Thompson, 60.

[62] Ibid.

[63] The U.S. Supreme Court foreclosed causes of action under the Fourteenth Amendment with Rodriguez. Thro, 1651.

[64] Serrano II, 939.

[65] Guthrie, Garms and Pierce, 196.

[66] Wise, 191.

Brimley expanded the definition of student equity to "fairness in the amount of revenue and services provided for children--the actual expenditures per child."[67]

Whereas the Serrano decisions relied on the equal protection clause of the California Constitution, the New Jersey Supreme Court relied on the equality guarantee provision of the state constitution to declare New Jersey's state school finance system unconstitutional in Robinson v. Cahill.[68] The New Jersey Supreme Court ruling was the first decision based only on state constitutional provisions where the plaintiffs prevailed.[69] The court ruled that the large disparities in the school finance system resulted from the reliance on local property tax levies and created unequal educational opportunities. The court decision was based on the idea that quality of educational opportunity is influenced by the dollar investment.[70] Both Serrano v. Priest and Robinson v. Cahill were decided on the belief that quality and quantity of educational opportunities were dependent upon funds invested and that equal protection requires equality from the government. These rulings establish student equity as a standard in state school finance systems.

---

[67] P. E. Burrup and V. Brimley, Jr., Financing Education in a Climate of Change. Boston, MA: Allyn and Bacon, 1982, 58.

[68] Robinson v. Cahill(1972), 287 A.2d 187, aff'd 303 A.2d 273 (New Jersey, 1973).

[69] Thro, 1645.

[70] Robinson v. Cahill, 481.

Horton v. Meskill in 1977 challenged the Connecticut funding formula on the basis that it violated the state equal protection clause, federal equal protection clause and the state education clause.[71] The Connecticut Superior Court used the reasoning of Robinson v. Cahill on the basis that the school funding system violated the equal protection clause of the state constitution. Horton v. Meskill also used Serrano v. Priest as reasoning that education is such a basic and fundamental function that it must be strictly scrutinized. The Connecticut Court acknowledged a relationship between the quality of educational programs and the funds spent to provide the opportunities.[72]

There were two early Illinois school finance litigation cases that were also unsuccessful using different approaches. The first was McGiniss v. Ogilvie which sought to establish that there was a violation of 14th Amendment equal protection rights due to a school funding system that allowed large spending disparities. The plaintiffs sought spending based on educational need. The Court rejected the claim and also noted that the remedy sought was judicially unmanageable.[73]

The second Illinois case, Blase v. State of Illinois, argued that the provision in the new Illinois constitution stating that education was the primary responsibility of the state required the state to fund at least fifty percent of the cost of education in the state. The plaintiffs chose not to argue adequacy or equity in the case but to rely on the apparent plain meaning of the Illinois constitution. Based on the floor debates of the constitutional convention, however, the court held that the language was merely hortatory and that the delegates had meant to state a goal, not a duty.[74]

---

[71] Horton V. Meskill(1974), 332 A.2d 113.

[72] Horton v. Meskill(1977), 376 A.2d 359, (Horton II).

[73] McGinnis v. Ogilvie, 384 US 322 (1969).

The New York courts addressed school funding in a 1981 case in Levittown v. Nyquist. The plaintiffs claimed that the finance system allowed a wide range in expenditures caused in large part by variations in local property wealth and that the result was violation of the equal protection clauses of both the New York and United States constitution. Although both lower courts upheld the claims of the plaintiffs, the Court of Appeals reversed on the basis that there was no claim that the education provided under the financing system fell below the minimum standard for the state and therefore the state had only to meet the burden of providing a basic rationale for the financing system which it did. Furthermore, the court said that the New York constitution simply did not require that education be equal or the same in all districts.[75]

The Nebraska Supreme Court addressed the issue in Gould v. Orr in 1993. The plaintiffs alleged that the funding disparities between districts resulted in disadvantages for children from poor districts as they did not have access to resources and courses necessary for them to compete with children from wealthy districts. The court rejected the claim on the bases that the state constitution guaranteed free instruction, not equal instruction, and that the plaintiffs failed to establish that spending differences impacted educational quality.[76]

---

[74] Blase v. State of Illinois, 55 Ill2d. 94 (1973).

[75] Levittown v. Nyquist, 443 N.Y.2d. 843 (1981).

The state of Oregon was faced with the issue in 1991 and upheld the financing system while leaving the door open for a future challenge. In this case, Coalition for Equitable Funding v. State, the plaintiffs argued that the state established certain standards and then failed to ensure that the local districts had the necessary funds to meet those standards. The court noted, however, that the voters had adopted a safety net amendment to the constitution in 1987. This amendment gave local districts the right to levy local taxes without voter approval if the money was not available from state sources. Because the amendment anticipated that there might be disparities and provided a way to address the disparities, there was no violation of the equal protection clause. The court did note, however, that the constitution contains a provision that calls for schools of uniform quality and that a claim might be possible if it were established that the funding scheme were responsible for lack of uniformity.[77]

In Dupree v. Alma School District No. 30,[78] an Arkansas court determined that education was not a fundamental right subject to the equal protection clause and the strict scrutiny provision. The court did acknowledge that the students' educational needs were not met by the minimum funds provided by the state. Arkansas's state funding system violated the equal protection clause on a rational basis and the state constitutional requirement to provide a suitable and efficient system of public schools. Student equity was used to defeat a state school funding system.

---

[76] Gould v. Orr, 244 Neb. 633 (1993).

[77] Coalition for Equitable Funding v. State, 811 P.2d. 116 (1991).

[78] Dupree v. Alma School District No. 30, 651 S.W.2d 90 (Ark. 1983).

One state which determined that education is a fundamental right and thus subject to the strict scrutiny test is Tennessee. In Tennessee Small School Systems et al v. McWherter, the court held that local control was not a compelling basis for a school financing system that resulted in such great disparities in educational opportunities. The court directed the legislature to develop an appropriate funding system.[79]

✓The case which has garnered the most national attention is the Texas case of Kirby v. Edgewood Independent School District where education was determined a fundamental right. The Texas Supreme Court focused on the efficiency clause in coming to the conclusion that an inequitable system is by definition an inefficient system. The court ordered the legislature to develop a new system of funding or the court would block the state from disbursing local funds.[80]

---

[79] Tennessee V. Small School Systems et al v. McWherter, 851 S.W.2d 139 (1993).

[80] Kirby v. Edgewood Independent School District, 761 S.W.2d 859 (Tex 1988).

The Montana Supreme Court chose to avoid the issues of fundamental rights and equal protection in the case of Helena Elementary School District no. 1 v. State of Montana in 1989. Instead, the court relied on Article X of the Montana constitution which guarantees equality of educational opportunity. Since it was established that there were not equal education opportunities and that the disparities were a result of the differences in local property wealth, the financing system was struck down.[81]

In Abbott v. Burke, the New Jersey Supreme Court ruled that the financing scheme was not fiscally neutral and that the thorough and efficient clause was not satisfied by the financing scheme. Because the present system was not meeting the constitutional requirements, the court ordered that the funding system be guaranteed by the state and that the system be revised to provide adequate funding for poor urban districts.[82]

In Rose v. the Council for Better Education, the Kentucky Supreme Court went farther than any other court. Not only did the court find that education was a fundamental right, that the current financing system did not satisfy the efficient mandate, and that the system was significantly underfunded; the court also took the opportunity to order a sweeping restructuring of the entire educational system. The court ruled that education as a fundamental right could not be assured when (1) the state education system was underfunded and inadequate; (2) there were inequalities among districts; and (3) there were not uniform educational program offerings.[83]

---

[81] Helena Elementary School District No. 1 v. State of Montana, 769 P.2d 766 (1989).

[82] Abbott v. Burke, 119 N.J. 287, 575 A.2d 359 (1990).

Education was determined a fundamental right in 1980 West Virginia Pauley v. Kelly.[84] The court based the decision on student equity and educational opportunity issues, stating that equal protection meant an equality in substantive educational offerings and results, no matter what the costs.[85]

Applicability of Previously Decided Cases to Florida

In August, 1994 The Coalition for Adequacy and Fairness in School Funding Incorporated, together with various individuals and 45 districts, filed suit in Leon County circuit court against the State of Florida over certain aspects of the school finance formula. The plaintiffs are seeking declaratory relief under Chapter 86 Florida Statutes, alleging that the defendants have violated their obligation under article IX section 1 of the Constitution of the State of Florida that "adequate" provision shall by made by law for a uniform system of free public schools . . .".[86] The complaint alleges that the defendants have failed to provide adequate educational opportunity in the public schools, in violation of the constitution in the following respects, as examples:

---

[83] Rose v. The Council for Better Education, Inc., 790 S.W.2d 186 (KY 1989).

[84] Pauley v. Kelly, 255 S.E.2d 859 (W. Va. 1979).

[85] Ibid.

[86] Coalition for Adequacy and Fairness in School Funding, et al., v. State of Florida, complaint 1994, para. 4, 5.

> 1. The state funding mechanisms are inadequate to provide all public school students with the educational opportunity required to gain proficiency in the English language.
>
> 2. The public school funding provisions of the legislature result in a deprivation of liberty and property for all public school students.
>
> 3. Defendants have failed to utilize lottery funds to supplement funds otherwise provided for public education.
>
> 4. Defendants have imposed on local school districts burdensome requirements.
>
> 5. Defendants have failed to make provision for adequate educational opportunities for students, particularly in areas with high poverty and low tax bases.
>
> 6. Defendants have prohibited local school districts from raising sufficient additional local funds to provide adequate educational opportunities.
>
> 7. Defendants have failed to make adequate and equitable provision for compensation of teachers.
>
> 8. Defendants have failed to provide adequate funding for educational facilities.
>
> 9. Defendants have failed to make adequate provision for students who have special educational needs, including foreign born populations.[87]

The plaintiffs allege that funding of the public schools has been rendered inadequate as measured by certain outcomes, including the number of students failing to achieve sufficient oral and written communication skills; an unusual and abnormally high rate of student dropouts; a large number of students unqualified for any college curriculum; foreign born students not being assimilated; lack of enrichment programs; and teachers leaving the school system.[88]

---

[87] Ibid., para. 74A-L.

As a result, plaintiffs allege that the students in the public schools are deprived of the opportunity to obtain an adequate education; the parents of many students are deprived of an opportunity to provide an adequate education for their children; and school districts and educational professionals are deprived of the ability to carry out their constitutional and statutory responsibility.[89]

Florida, like every other state except Mississippi, has a constitution that requires the state to provide a system of free public education. Florida's constitution (1968) mandates that

> adequate provision shall be made by law for a uniform system of free public schools and for the establishment, maintenance and operation of institutions of higher learning and other public education programs that the needs of the people may require.[90]

As in the more recent cases from Alabama, Ohio, and New Jersey focusing on adequacy, the court's interpretation of adequacy is vital to a state such as Florida whose constitution expressly mandates an adequate provision in the state education clause.

Until recent cases such as Alabama Coalition for Equity and Adequacy v. Hunt (1993), the court's findings relative to adequacy have been less than all definitive. Many instances from the courts have commented on adequacy in an indirect manner. In San Antonio v. Rodriguez (1973) where the issue was a U.S. Constitutional concern, the courts identified an adequate education in terms of a minimum as one that "provide(s) each child with an opportunity to acquire the basic minimal skills necessary for the enjoyment of the rights of speech and of full participation in the political process". This minimal skills necessary definition of adequacy set the standard for cases to follow.[91]

---

[88] Ibid., para. 75A-H.

[89] Ibid., para. 76.

[90] Florida Constitution, Article IX, Section i.

The minimal skills necessary standard was used in the Board of Education Levittown v. Nyquist case in which the court of appeals upheld the state education funding system as constitutional. Nyquist was primarily concerned with inequalities in the availability of financial support for local school districts. The court acknowledged that certain districts were "forced to provide instructional services and facilities of a lesser quantity, variety, and quality than those provided in some other school districts," but further commented that no plaintiff claimed or demonstrated "that the educational facilities or services provided in the school district they represent fall below the state-wide minimum standard of educational quality and quantity fixed by the Board of Regents." As in Rodriguez, the court relied on the minimum standard as the floor for adequate education and noted that "the Federal

---

[91] San Antonio Independent School District v. Rodriguez(1973), 411 U.S. 1, 93 S.Ct. 1278, 36 L.Ed.2d 16.

Constitution may be said to fix a floor for the rights of our people, the ceiling may be set by each State's own constitutional charter."[92]

Florida has recent experience with challenge to the legislatively established cap (ceiling) on a district's levy of discretionary millage up to the constitutional limit on education funding. In Florida Department of Education v. Glasser (1993) the Florida Supreme Court upheld the legislature's authority to establish a cap on discretionary millage, effectively limiting the discretion of Florida school districts to levy additional taxes above the legislature's cap in order to preserve programs placed at risk because of decreased education funding.[93]

Although the Florida Supreme Court ruled against the Sarasota school district, more important than the ruling are the opinions of the justices. Justice Barkett encouraged school districts to direct their efforts "toward assuring adequate state funding for all the educational needs of all our children." The court did not define adequate state funding but implied that the situation at the time was other than adequate. Justice Kogan concurred: "The time may come when the competing legal restraints of the constitutional requirement for education uniformity v. the constitutional restrictions on the tax base cannot be reconciled in at least some counties without substantially altering the present taxing system."[94]

---

[92] Levittown v. Nyquist(1982), 439 N.E.2d 359 NY.

[93] Florida Department of Education v. Glasser, 622 So.2d 944 (Fla. 1993).

St. Johns County, Florida v. Northeast Florida Builders Association (1991) determined that

> state constitutional requirement of "uniform system" of public schools only requires that system be provided that gives every student equal chance to achieve basic educational goals prescribed by legislature, not that every school district in the state receive equal funding or that each educational program be equivalent.

Justice Kogan encouraged the legislature to evaluate the purpose of the restraints for real fiscal purpose as to impediments to educational enhancements.[95]

In the West Virginia case Pauley v. Kelly (1979), the court continued implications as to the meaning of adequacy when it mandated that the educational system be absolutely complete, and attentive in all ways, extending beyond usual guidelines producing outcomes without waste. The Supreme Court remanded Pauley with instructions to identify the elements necessary to realign all districts with the intent of the West Virginia Constitution for a thorough and efficient educational system. The court sought details for a quality education including curriculum, facilities, materials and equipment, and personnel.[96]

---

[94] Ibid.

[95] St. Johns County, Florida v. Northeast Florida Builders Association, 583 So.2d 635, 641, (Fla. 1991), 14.

[96] Pauley v. Kelly(1979), 162 W.Va. 672, 255 S.E.2d 859, 165.

In the Kentucky Supreme Court, Rose v. Council for Better Education (1989), citing Pauley, declared the system of schools "constitutionally deficient" and directed the state to design a new system to guarantee all children an opportunity for an adequate education through at least seven capacities. The court's mandated capacities for all include:

> 1. Sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization.
>
> 2. Sufficient knowledge of economic, social, and political systems to enable the student to make informed choices.
>
> 3. Sufficient understanding of governmental processes to enable the student to understand the issues that affect his or her community, state, and nation.
>
> 4. Sufficient self-knowledge and knowledge of his or her mental and physical wellness.
>
> 5. Sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage.
>
> 6. Sufficient training or preparation for advanced training in either academic or vocational fields so as to enable each child to choose and pursue life work intelligently.
>
> 7. Sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market.[97]

The court made clear, with its mandate to redesign the Kentucky school system, that the seven elements of an adequate education system were established as minimum standards.

---

[97] Rose V. Council for Better Education, 790 S.W.2d 186 [60 Ed.Law Rep. [1289]] (KY. 1989), 1315.

The New Jersey Supreme Court in Abbott v. Burke (1990) concluded that the quality of education in poor urban districts was inferior

> as measured by finances and programs and by student achievement, based on differences in educational opportunities in many areas including exposure to computers, science education, foreign language programs, art and music programs, physical education and physical facilities.

The court noted the need to address the disadvantages of poorer students and required the legislature to provide educational funding that would be adequate to meet the special educational needs of less affluent urban districts. The court noted the importance of providing a minimum level of educational opportunity to equip the student to become a citizen and productive in the labor market. Minimum level of educational opportunity will vary with an adequate education for all students, meaning something individual, and perhaps unequal, for each student. Minimum level may mean more and/or different educational services depending on needs.[98]

Additionally, in Alabama Coalition for Equity and Adequacy v. Hunt (1993),

> the court found the evidence is compelling that many Alabama schools fall below standards of minimal educational adequacy for facilities, curriculum, staffing, textbooks, supplies and equipment, and transportation that have been adopted by the state itself.

Measures of inadequacy included drop out rates and college remediation, and students' overall readiness for the workforce. This court found Alabama schools inadequate by numerous criteria "measured by (1) state and regional accreditation standards (2) substantive Alabama educational standards, such as those set out in the Alabama Education Improvement Act, Performance-Based accreditation, and the Plan for Excellence or (3) indicators recognized by state officials as appropriate measures of school quality, such as drop-out rates, college-level remediation rates, and the extent to which students are prepared for the workforce." The court established specific criteria for adequacy using the state's guidelines and policies for guidance.[99]

---

[98] Abbott v. Burke(1990), 119 N.J. 287, 575 A.2d 359 [60 Ed.Law Rep. [1175]], 1176.

In evaluating Alabama schools by these guidelines, the court found "that if inadequate educational opportunities exist in some systems, then the system as a whole must be deemed inadequate."[100] In ruling Alabama schools inadequate, the court ordered that the essential principles and features of the liberal system of public schools required by the Alabama Constitution include the following: adequate educational opportunities consist of, at a minimum, an education that provides students with opportunity to attain the following:

> (1) Sufficient oral and written communication skills to function in Alabama, and at the national and international levels, in the coming years;
>
> (2) Sufficient mathematic and scientific skills to function in Alabama, and at the national and international levels, in the coming years;
>
> (3) Sufficient knowledge of economic, social, and political systems generally, and of the history, politics, and social

---

[99] Alabama v. Hunt, CV-90-883-R, Circuit Court for Montgomery County, Alabama, (1993), 5, 37, 38, 59, 65, 122, 123, 124.

[100] Ibid.

> structure of Alabama and the United States, specifically, to enable the student to make informed choices;
>
> (4) Sufficient understanding of governmental processes and of basic civic institutions to enable the student to understand and contribute to the issues that affect his or her community, state, and nation;
>
> (5) Sufficient self-knowledge and knowledge of principles of health and mental hygiene to enable the student to monitor and contribute to the issues that affect his or her own physical and mental well-being;
>
> (6) Sufficient understanding of the arts to enable each student to appreciate his or her cultural heritage and the cultural heritages of others;
>
> (7) Sufficient training, or preparation for advanced training, in academic or vocational skills, and sufficient guidance, to enable each child to choose and pursue life work intelligently;
>
> (8) Sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in Alabama, in surrounding states, across the nation, and throughout the world, in academics or in the job marker, and;
>
> (9) Sufficient support and guidance so that every student feels a sense of self-worth and ability to achieve, and so that every student is encouraged to live up to his or her full human potential.[101]

The definition of adequate education is still in its infancy and conjures different interpretations from different people. What is considered inadequate in New Jersey and Alabama is relative and may be considered acceptable to another part of the country. The courts' reliance on state accepted accreditation standards and comprehensive plans encourage individual discretion by the states. Both equity and adequacy are issues in school education funding challenges today.

---

[101] Ibid.

State school funding systems can be challenged based on the state constitution's equal protection clause or on interpretation of the wording of the state's education clause.[102] Interpretations of what is equitable and what is adequate depend on the wording and emphasis on education in the state constitutions.

Categorization of School Financing Challenges

Thro categorized state education clauses into four groups and analyzed each group in relation to challenges of state school funding systems. Category I clauses impose a minimum state educational obligation and have generally not been successful in school finance litigation. Category I states have an education clause providing for a system of public schools and nothing more. States in this category include: Alabama, Alaska, Arizona, Connecticut, Hawaii, Kansas, Louisiana, Nebraska, New Mexico, New York, North Carolina, Oklahoma, South Carolina, Utah, and Vermont.[103] Category II clauses require more state obligation, mandate certain minimum standards such as thorough and efficient and have had some success in school finance litigation. Category II states include: Arkansas, Colorado, Delaware, Florida, Idaho, Kentucky, Maryland, Minnesota, Montana, New Jersey, North Dakota, Ohio, Oregon, Pennsylvania, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.[104] Category III clauses include a more specific and strong state mandate for education and include: California, Indiana, Iowa, Massachusetts, Nevada, Rhode Island, South Dakota, and Wyoming.[105] Category IV clauses have the strongest state obligation, usually call for education as a fundamental right, and include: Georgia, Illinois, Maine, Michigan, Missouri, New Hampshire, and Washington.[106] Thro states that "because the state education clauses have limited utility as vehicles for public finance reform, litigants have searched for alternative state constitutional provisions that would be more effective."[107]

---

[102] Thro, 1647-1649.

[103] Thro, 1661-1662.

[104] Thro, 1663.

Several cases have been decided based on state constitutional wording. Certain state courts have determined education to be a fundamental right and other state courts have determined otherwise.[108] Several challenges to state finance systems have been decided for the state.[109] Some state finance systems have been overturned based on the state's equal protection clause, and some state funding formulas have been declared unconstitutional based on wording of the state constitution.[110]

---

[105] Thro, 1666.

[106] Thro, 1667.

[107] Thro, 1669-1670.

[108] See for example: Shofstall v. Hollins, 515 P.2d 590 (Ariz 1973); Milliken v. Green, 212 N.W.2d 711 (Mich 1973).

[109] Ibid.

[110] New Jersey: Robinson v. Cahill, 287 A.2d 187 (1972), aff'd 303 A.2d 273 (New Jersey, 1973); Connecticut: Horton v. Meskill, 332 A.2d 113 (1974); Washington: Seattle School District No. 1 v. Washington, 585 P.2d 71 (Wash 1978).

School finance litigation is a complex issue as described by Webb, McCarthy, and Thomas:

> While the most significant school finance litigation has involved challenges to inequities and inadequacies in state funding systems, other school finance litigation, such as the distribution of federal aid, funding services for special needs students, and the imposition of school fees, has implications for the collection and distribution of school revenues. Indeed, most educational litigation has fiscal implications...courts continue to be called on to resolve conflicts over property tax exemptions, disposition of interest earned on school funds, and other issues related to business management practices. Increased pressure from special interest groups, reductions in federal aid, and efforts to provide relief for taxpayers are placing substantial strains on school budgets. Difficult decisions regarding the use of limited school resources inevitably will be accompanied by legal challenges. Specific issues that will be the focus of future lawsuits cannot be predicted, but a steady volume of school finance litigation seems assured.[111]

The Florida Formula

Florida is the fourth most populous state in the nation, with 2.4 million K-12 public school students. The state is comprised of sixty-seven county districts with unweighted full time equivalent membership ranging from 1,019 students in Lafayette district schools to 380,557 students in Dade district schools. Florida's 67 fiscally independent school districts are based on county lines. Each district must provide evidence of its effort to maintain an adequate school program throughout the district.[112]

---

[111] Webb, McCarthy, and Thomas, 258.

[112] Florida Statute 236.012(1).

The foundation distribution system of the state of Florida was chosen for this study for several reasons. The Florida Education Finance Program funding distribution system includes a foundation component in which revenues per pupil among the districts are substantially equalized by the state.

For several years, the Minimum Foundation Program provided the mechanism for funding distribution in Florida. In 1968, Florida's Constitution was rewritten to require that adequate provision be made for a uniform and free system of public school.[113] In 1973, Roe L. Johns directed a study of Florida's financial structure as part of the National Education Finance Project. The result of Johns' study was significant changes to the MFP, creating the Florida Education Finance Program (FEFP).[114] The legislative intent of the Florida Education Finance Program was:

> To guarantee to each student in the Florida public school system the availability of programs and services appropriate to his educational needs which are substantially equal to those available to any similar student notwithstanding geographic differences and varying economic factors.[115]

Under the FEFP, the standard for determining state allocation was changed to weighted pupils based upon the cost of providing educational services to students depending upon the program in which they are enrolled. The FEFP, defined as a highly modified foundation plan, is characterized by a relatively high percentage of state aid largely driven by a weighted per-pupil formula. In attempting to provide equalization of educational opportunity the FEFP formula recognizes: (1) varying local property tax bases, (2) varying program cost factors, (3) district cost differentials, and (4) differences in per-student cost for equivalent educational programs due to sparsity and dispersion of population.[116]

---

[113] Florida Constitution 1968, Article IX, Section 1.

[114] Shiver, 80-81.

[115] Florida Statute 236.012(1).

The FEFP bases financial support for education on the number of students participating in a particular educational program. The FEFP is calculated by multiplying the number of full-time equivalent students (FTE's) in each of the educational programs by cost factors to obtain weighted FTE's.

The FEFP addressed vertical equity by recognizing the differing costs of providing educational services based upon specific student needs.[117] Program cost factors are determined by the legislature and represent relative cost differences among the FEFP programs.

Horizontal equity was considered through the addition of a district cost differential. The district cost differential was incorporated to account for differences in costs to provide educational services in districts where the cost of living varied from the statewide average. The FEFP incorporated a power equalizing provision which guaranteed each district the same revenue for the same property tax rate. The power equalization provision equalized the disparities in funding generated by the required local effort in counties with lower assessed property values and addressed taxpayer equity.[118]

---

[116] Ibid.

[117] Shiver, 81.

Revenues to fund the FEFP are generated from state and local sources. The state portion of the FEFP is the primary source of revenue and is provided by legislative appropriation from funds generated primarily through sales tax collections.[119] Revenue from local sources is generated substantially from local property tax levies.[120] In order to participate in the FEFP, local school boards must levy the required local effort millage rate established annually by the Legislature.

All local school districts are required by statute to apply a specified millage rate to the aggregate assessed property value as a part of the required local effort provision of the FEFP. The millage rate for each district is computed annually as the product of an equalization factor times the aggregate assessed property value in the district.[121]

Required local tax effort in property taxes for calculation of district required local effort millages for the 1994-95 fiscal year was set by the legislature at $3.2 billion in the Appropriations Act. Using the certified 1994 tax roll from the Department of Revenue, the Commissioner computed and certified the required local effort millage rate for each district. In calculating the FEFP for the 1994-95 fiscal year, each district's deduction for required local effort was the certified millage on 95% of the nonexempt assessed valuation of the district.

---

[118] Johns, 71.

[119] Florida Department of Education, Florida Education Finance Program, 1994-95, Statistical Report. Tallahassee, FL.

[120] Ibid.

[121] Florida Statute 236.081(4)

The amount produced by applying the average computed required local effort millage rate of 6.542 to the tax roll certified July 16, 1994 was adjusted by an equalization factor for each district. The millage rate resulting from the application of this equalization factor was added to each district's required effort millage rate as an additional required local effort rate for equalization. The summation of these two rates became each district's total required local effort certified millage rate.[122]

Each school board participating in the state allocation of funds for current operation of schools must levy the millage set for its required local effort. Based on the 1994 tax roll provided by the Department of Revenue, the Commissioner of education certified the required millage of each district. Certifications varied from 7.054 mills to 6.498 mills due to use of assessment ratios designed to equalize the effect on the FEFP of differing levels of property appraisal in the counties. A limitation that local required effort not exceed 90% of a district's total FEFP entitlement reduced three districts' required local effort, one district as low as 5.024 mills.[123]

---

[122] Florida Statute 236.081(4)(b).

In addition to the required local effort millages, districts are also permitted to levy discretionary operating millages. In 1994-95 school districts were permitted levies of 0.51 mill discretionary and 0.25 supplemental discretionary, with the supplemental discretionary levy guaranteed to generate $50 per student. Local revenue used to support schools is derived almost exclusively from ad valorem property taxes. No local non-property taxes are levied specifically for support of schools. Local revenues are based on 95 percent of the assessed valuation of the nonexempt property in the district. Levy of discretionary millages introduces inequity into the FEFP. Richer districts generate more revenue for the same effort.

For capital outlay and maintenance, school boards may levy up to 2.0 mills. This 2.0 mill levy generates revenue for construction and remodeling; site and site improvement; auxiliary or ancillary facilities; maintenance, renovation, and repair of existing school plants; and school bus purchases. Payments for lease-purchase agreements for educational facilities and sites are authorized in an amount not to exceed one-half the proceeds of the millage levied under this authority. Proceeds may also be used to repay loans used for these authorized purposes.[124]

---

[123] Ibid.

In addition to the board-set levy, qualified electors may vote an additional millage levy for operation and capital outlay purposes for a period not to exceed two years. Tax levies for debt service are in addition to the levies for current operation but are limited by State Board of Education rule to six mills and 20 years duration except with specific State Board approval. Qualified electors may vote for a local bond issue to be retired by a millage levy. State Board of Education rules prohibit school districts from issuing school bonds in excess of 10% of the nonexempt assessed valuation of the district without specific State Board approval.[125]

Funding for Florida schools from both state and local sources has increased in gross dollars since the initiation of the Florida Education Finance Program (FEFP) in 1973-74. Of the total funding from state and local sources combined, however, the portion contributed by the state has decreased significantly since 1973.[126]

---

[124] Florida Statute 236.25(2).

[125] Florida Statutes 236.31, 236.42; State Board Rule 6A-1.037.

[126] Department of Education, 1994-95 Florida Education Finance Program, Statistical Report, 3.

Summary

This chapter contained a review of the literature on equity and the history of funding for education in the state and provided a general overview of the Florida Education Program including provisions for discretionary operating and supplemental discretionary millage levies.

CHAPTER III

METHODOLOGY

Introduction

This study focused on the effects of the capital outlay transfers on equity within a school funding distribution system. In the previous chapter, the relevant literature was reviewed. This chapter includes a discussion of the method with which the equity effects of this levy were examined.

This chapter begins with a statement of the problem discussed in this study. That discussion is followed by a discussion of the research design and methods used to assess the effects on fiscal equity of the capital outlay transfers from the capital outlay fund to the general fund for operations.

Statement of the Purpose

The purpose of this research was to extend equity analysis to include capital outlay fund transfers made to the general fund for educational expenditures for operations. It includes analysis of the equity of the Florida Education Finance Program revenue in the general fund before capital outlay transfers and an analysis of the impact of capital outlay fund transfers on the equity of the total educational revenue for operations in the general fund.

This research will provide the answer to the following question:

What were the effects on the relationship of the equity among Florida school districts of total general fund educational revenue after capital outlay transfers from capital outlay funds to the general fund for the most recent year data were available (1994-95) in Florida?

Research Design

This study was conducted to determine the effects of the capital outlay transfers on the fiscal equity within a state school finance system. To answer the question, two conditions were established as part of the research design. Under the first condition, the fiscal equity was determined without the capital outlay transfers included in the revenue calculation. Under the second condition, the fiscal equity was determined with the capital outlay transfers included in the revenue calculation. The difference between the two calculations was the effects of the capital outlay transfers the fiscal equity within a state school finance system.

In the construction of the research design, the 1994-95 Florida Education Finance Program Second Calculations of all 67 Florida school districts were evaluated for fiscal equity before and after the capital outlay transfers. Revenue from the capital outlay transfers had the potential of altering fiscal equity within the finance system. The result of the capital outlay transfers to the general fund could be a system that was more equitable or less equitable. The overall design of the study established the fiscal equity before and after the capital outlay transfers were introduced.

Data Sources and Measures of Equity

The standard measures of equity used in this study were mean, range, restricted range, federal range ratio, variance, standard deviation, relative mean deviation, coefficient of variation, McLoone Index, Gini Coefficient, and the Lorenz curve. The variable measures for vertical and horizontal equity were revenue per weighted FTE per district.

Simple regression and correlation were used to measure fiscal neutrality. The independent variable was revenue per weighted FTE per district. The dependent variable was the assessed valuation of nonexempt property in each district.

Box Plot

A box plot shows the variation of data. A box plot illustrates the mean, first and third quartiles, and the high and low values of the variables that fall outside the inter quartile range. The horizontal equity of the distribution is greater the closer the quartiles high and low values are to the mean of the distribution. Data for the box plot were taxpayer equity before and after the introduction of the capital outlay transfers for each of the school districts.

Mean

The mean is a measure of the central tendency of the distribution of observations. It represents the average value of revenue per weighted FTE in each district. The mean takes into account all the observations in the distribution. The mean was calculated with the following formula:

SUM Xi / N

where SUM is the sum of all districts, Xi is revenue generated in each district i, and N is the number of districts.[1]

Range

The range is the difference between the highest and lowest observations in a distribution.[2] The range calculated in this study was the difference between the highest and lowest revenue generated per taxpayer per district. The smaller the value of the range, the smaller the variation in the distribution of taxpayer equity. The smaller the variation, the better the equity of the distribution taxpayer equity. As a measure of equity, the usefulness of the range is limited. Range is based on only two values, does not indicate the pattern of variation, and is not sensitive to changes within the distribution.[3]

The range was calculated with the following formula:

Highest Xi - Lowest Xi

where Xi is the average revenues in district i.[4]

---

[1] D. C. Thompson, R. C. Wood, and D. S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices White Plains, NY: Longman Publishing Group, 1993, 247.

[2] Ibid.

[3] Ibid.

[4] Ibid.

Restricted Range

The restricted range is the difference between the observation at the 95th percentile of the distribution and the 5th percentile. Due to the sensitivity of the range to extreme values, the restricted range eliminates values below the 5th percentile and above the 95th percentile. The smaller the value of the restricted range, the smaller the variation in the distribution of revenue per taxpayer per district. The smaller the variation, the better the revenue distribution. However, like the range, the restricted range is subject to the same limitations as a measure of equity.[5]

The restricted range was calculated with the following formula:

$$X_i \text{ at } 95 \text{ percentile} - X_i \text{ at } 5 \text{ percentile}$$

where Xi was the revenue per weighted FTE in district i[6]. The revenue per weighted FTE per district was arranged in ascending order.

Federal Range Ratio

The federal range ratio is the restricted range divided by revenue per weighted FTE per district at the 5th percentile. The value is expressed as a ratio. The smaller the value of the federal range ratio, the smaller the variation in the distribution of revenues per weighted FTE per district. The smaller the variation, the better the equity of the distribution of revenues. As a measure of equity, the federal range ratio is subject to the same limitations as the restricted range.[7]

---

[5] Berne, Selected Papers, 21.

[6] Berne and Stiefel, Measurement of Equity, 20.

The federal range ratio was calculated with the following formula:

Restricted Range / Xi at 5 percentile

where Xi was the revenue per weighted FTE in district i[8] .

Variance

The variance is the average of the squared deviations from the mean. The smaller the value of the variance, the smaller the variation the distribution of revenue per weighted FTE per district[9] . The smaller the variation, the better the equity of the distribution of revenues. The advantage of the variance over the measures previously discussed is that the variance takes in to account all observations. However, the variance is not expressed in original units and is sensitive to the outliers.

The variance was calculated with the following formula:

[SUM Pi (Xp - Xi)2] / (SUM Pi)

where SUM is the sum of weighted FTE in all districts, Pi is number of weighted FTE in district i, Xp is the mean revenues per weighted FTE, and Xi is the revenue per weighted FTE in district i.[10]

---

[7] Ibid.

[8] Ibid.

[9] Berne, Selected Papers, 23-24; D. H. Monk, Educational Finance New York: McGraw-Hill Publishing Company, 1990, 48-50; D. S. Moore, Statistics, 3d ed. New York: W. H. Freeman and Company, 1991, 220-223.

[10] Thompson, Wood, and Honeyman, 249.

Standard Deviation

The standard deviation is the square root of the variance. The smaller the value of the standard deviation, the smaller the variation in the distribution of revenues per district. The smaller the variation, the better the equity of the distribution. The advantage of the standard deviation is that all observations are included in the calculation and that the units of measurement are in the original scale. The standard deviation is sensitive to outliers.[11]

The standard deviation was calculated with the following formula:

square root of the variance

Coefficient of Variation

The coefficient of variation is the standard deviation divided by the mean or square root of the variance divided by the mean. It is expressed as the ratio of the standard deviation of the distribution to the mean of the distribution. The smaller the value of the coefficient of variation, the smaller the variation in revenues per district. The smaller the variation, the better the equity of the distribution of revenues. It is sensitive to outliers but not to changes in scale.[12]

The coefficient of variation was calculated as follows:

square root of the variance / Xp

Where Xp is the mean revenue per weighted FTE for all districts.[13]

---

[11] Ibid.

[12] Ibid.

[13] Ibid.

McLoone Index

The McLoone Index is the ratio of the sum of a variable if each of the variables below the mean had values equal to the mean of the population. The larger the value of the McLoone Index (up to 1), the closer the lower half of the distribution is to the median of the distribution.

The McLoone Index was calculated with the following formula:

SUM (1...j) PiXi / Mp SUM (1...j) Pi

where districts 1 through j are below the median, SUM is the sum of weighted FTE in all districts 1 through j, Pi is the number of weighted FTE in district i, Xi is the revenues per weighted FTE in district i, and Mp is the median revenue per weighted FTE for all districts.[14]

Gini Coefficient

The Gini Coefficient indicates how far the distribution of revenues is from providing each percentage of students with the same percentage of revenues. The smaller the value of the Gini Coefficient, the more equitable the distribution of revenues in providing a specified percentage of students with the same percentage of revenues. Values range from zero to one. The coefficient compares revenues at each level with revenues at every other level and is sensitive to changes throughout the distribution, though not to outliers.[15]

---

[14] Ibid, 250.

[15] Thompson, Wood, and Honeyman, 251; Berne, Selected Papers, 28-32; Berne and Stiefel, Measurement of Equity, 19-21; F. Jordan and M. P. McKeown, "Equity in Financing Public Elementary and Secondary

The Gini Coefficient was calculated with the following formula:

$$SUMi\ Sumj\ PiPj\ [Xi - Xj] / 2(SUMi\ Pi)2\ Xp$$

where SUM is the sum for all weighted FTE in districts i and district j, Pi is the number of weighted FTE in district i, Pj is the number of weighted FTE in district j, Xi is the revenues per weighted FTE in district i, Xj is the revenues per weighted FTE in district j, and Xp in the mean revenue per weighted FTE for all districts.[16]

Lorenz Curve

A Lorenz Curve graphically illustrates the Gini Coefficient. The Lorenz Curve is depicted by the cumulative percent of weighted FTE on the abscissa and the cumulative percent of revenues on the ordinate. Equality in the population exists if the Lorenz Curve falls on the x=y line. The greater the line falls from the x=y line, the greater the inequity of revenues. Data used to plot the Lorenz curves were revenues per weighted FTE for each of the school districts.[17]

The foregoing measures dealt with the dispersion or variation of a single variable, revenues per weighted FTE per district. There are other measures that describe a relationship between two variables and are regression-based measures. Correlations and slopes are such regression based measures.

Schools," in James W. Guthrie, School Finance Policies and Practices Cambridge, MA: Ballinger Publishing Company, 1980, 96-97.

[16] Thompson, Wood, and Honeyman, 251.

[17] Jordan & KcKeown, 97.

Simple Correlation

Simple correlation describes the degree to which two variables are associated. In the present study, the two variables are wealth (assessed valuation of property) in each school (independent variable) and the corresponding revenues per weighted FTE (dependent variable). In the study of school finance, the two variables are used to describe the fiscal neutrality of a state school finance system.[18] A fiscally neutral system is indicated by no relationship between wealth and revenues per weighted FTE for education.

The correlation coefficient has values that range from -1.0 to +1.0. When two variables are positively associated, larger values of one tend to be accompanied by larger values of the other. When two variables are negatively related, larger values in one tend to be accompanied by smaller values of the other. A value of +1.0 indicates a perfect positive linear relationship and a value of -1.0 a perfect negative linear relationship. A value of 0 indicates no linear relationship between the two variables. As a measure of fiscal neutrality, a correlation coefficient of 0 would indicate no linear relationship between the two variables and, thus, a fiscally neutral system.[19]

---

[18] Thompson, Wood, and Honeyman, 251; Berne and Stiefel, Measurement of Equity, 25-26.

[19] Thompson, Wood, and Honeyman, 251.

Scatter plots are graphs of the bivariate data. The value of the independent variable is plotted on x-axis and the dependent variable on the y-axis. The square of the simple correlation, the coefficient of determination, is the portion of variation in the dependent variable explained by the relationship to the independent variable.[20]

The simple correlation is the Pearson correlation coefficient and was calculated using the following formula:

SUM Pi(Xi-X)(Wi-W)\ [square root SUM Pi(Xi-X)2][square root
SUM Pi (Wi-W)2]

where SUM is the sum of weighted FTE in all districts, Pi is the number of weighted FTE in district i, Xi is the revenues per weighted FTE in district i, X is the mean revenues per weighted FTE for all districts, Wi is the wealth per weighted FTE in district i, and W is the mean wealth per weighted FTE for all districts.[21]

Slope of the Regression Line

The regression equation is used to describe the relationship between two variables. That equation is:

$$Y=a+bX$$

where Y is the estimated value, a the intercept (value of Y corresponding to X=0), and b the slope or regression coefficient (line of best fit describing the relationship between the independent and dependent variables).[22] The slope of the regression line measures the magnitude of the relationship between two variables. The slope indicates the size of the change in the dependent variable associated with a one-unit change in the independent variable. A fiscally neutral public school funding system has a slope of zero. The higher the value of positive slope the more inequitable the relationship between wealth and revenues per weighted FTE per district.[23]

---

[20] Ibid., 27; Moore, Statistics, 254.

[21] Thompson, Wood, and Honeyman, 251.

The calculations of the slopes were based on the mean values of the independent and dependent variables. The following formula was used to calculate the slope:

$$\text{SUM } Pi(Xi-X)(Wi-W)/\text{SUM } Pi(Wi-W)2$$

where SUM is the sum of weighted FTE in all districts, Pi is the weighted FTE in district i, Xi is the revenues per weighted FTE in district i, X is the mean revenues per weighted FTE in all districts, Wi is the wealth per weighted FTE per district, and W is the mean wealth per weighted FTE per district.[24]

Summary

In this chapter, the design and methods used in the study were discussed. The chapter began with a discussion of a statement of the problem of transfers and discussed the design of the study. This chapter concluded with discussion of methods used to assess equity of the distribution of revenues within the state finance system.

---

[22] Keppel and Zedeck, Data Analysis, 58; Kleinbaum, Kupper, and Muller, Applied Regression, 45-8.

[23] Thompson, Wood, and Honeyman, 252.

[24] Ibid.

CHAPTER IV

DATA ANALYSIS

This chapter contains an analysis of the data evaluated in this study. This analysis was performed to answer the question: What were the effects of the relationship of the equity among Florida school districts of total general fund educational revenue after capital outlay transfers from capital outlay funds to the general fund for the most recent year data were available (1994-95) in Florida? The measures of equity selected for study were the mean, range, restricted range, federal range ratio, variance, standard deviation, coefficient of variation, McLoone Index, and Gini Coefficient. The dependent variable evaluated was revenue per weighted full time equivalent student (FTE) before and after capital outlay transfers to the general fund.

Fiscal neutrality indicators selected for this study were the correlation coefficient, coefficient of determination, and the slope of the regression line. The relationship analyzed was that of the independent variable, assessed valuation per weighted FTE in each district, and the dependent variable, revenues per weighted FTE in each district.

The elements of the Florida Education Finance Program analyzed were revenues per student in each district before and after capital outlay transfers. The transfers included were the actual transfers from the capital outlay fund to the general fund for fiscal year 1994-95 for each of the sixty-seven school districts in Florida.

Measures of Equity

Box Plot

Box plots are visual representations of the variability of school funding. Box plots illustrate the mean, first and third quartiles, and the high and low values of the variables that fall outside the inter quartile range. The equity of the distribution is greater the closer the quartiles high and low values are to the mean of the distribution.

The box plot in Appendix A is an overall graphic display of the variability of revenues before and after capital outlay transfers. The variability of revenues after transfers increased. The widening of the quartiles on the plot represent a decrease in fiscal equity both above and below the mean level of funding for the state.

Mean

The mean is a measure of the central tendency of the distribution of observations. The mean represents the average value of revenues per weighted FTE in each district and considers all the observations in the distribution.

Table 1 displays the values derived from the calculation of the mean. The mean of total general fund revenue per weighted FTE before capital outlay transfers was $3,341.30. This value increased to $3,424.11 after inclusion of capital outlay transfers. The increase in the mean indicates that transfers from capital outlay funds had a positive effect on the level of weighted FTE funding. The implications of this are that capital outlay fund transfers during the time frame evaluated were used as a source of general revenue for the operation of the schools.

Table 1 - Means of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	$3,341.30
With transfers	3,424.11

Range

A range is the difference from the lowest and highest values in the distribution. The lower the difference in two values, the greater the equity of the distribution. The range may be the least reliable measure because it is not sensitive to changes within the distribution, and is limited as a measure of dispersion because it only considers the minimum and maximum values in the distribution.

Table 2 displays the values derived from the calculation of the range. The range of total general fund revenue per weighted FTE before capital outlay transfers was $750.52. After capital transfers, the value decreased to $743.15. The decrease in the range of revenues indicated the transfers had an equalizing effect on the distribution of revenues per FTE in each district.

Table 2 - Ranges of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	$750.52
With transfers	743.15

Restricted Range

The restricted range is the difference between the observations at the 95th percentile of the distribution and the 5th percentile. Due to the sensitivity of the range to extreme values, the restricted range eliminates values below the 5th percentile and above the 95th percentile. The value of the restricted range is lower than the range. The lower the value of the restricted range, the greater the equity of the distribution.

Table 3 displays the values derived from the calculation of the restricted range. The restricted range of revenues before the transfer of capital outlay revenues was $345.24. After the transfer of capital outlay revenues the value increased to $520.20. This increase in the variation of the restricted range indicates a decrease in the equitable distribution of funds. This increase in the restricted range indicates that there was greater spread in the middle 90 percent of the districts. In other words, the extremes of less than 5 percent and greater that 95 percent did not use transfers to the extent as those districts in the middle range. The upper districts may not have needed to transfer and the lower districts may not have been financially able to transfer.

Table 3 - Restricted Ranges of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	$345.24
With transfers	520.20

Federal Range Ratio

The federal range ratio is the restricted range divided by the revenue per weighted FTE per district at the 5th percentile. The value is expressed as a ratio. The smaller the value of the federal range ratio, the smaller the variation in the distribution of revenues per weighted FTE per district. The smaller the variation, the better the equity of the distribution of revenues.

Table 4 displays the values derived from the calculation of the federal range ratio. The value of the federal range ratio before capital outlay transfers was .10785. The value of the federal range ratio after capital outlay transfers increased to .16217. This increase in the variation of the federal range ratio indicates a decrease in equitable distribution of funds as a result of the transfer of funds from capital outlay.

Table 4 - Federal Range Ratios of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	.10785
With transfers	.16217

Variance

The variance is the average of the squared deviations from the mean. The smaller the value of the variance, the smaller the variation in the distribution of revenue per weighted FTE per district. The smaller the variation, the greater the equity of the distribution.

Table 5 displays the values derived from the calculation of the variance. The variance of total general fund revenue per weighted student before capital outlay transfers was 16,381.98. The variance of total general fund revenue per weighted student after capital outlay transfers increased to 27,027.00. This increase in variance indicated a decrease in equitable distribution of funds as a result of the transfer of funds from capital outlay. This indicates that the use of capital outlay transfers outside the distribution system of the FEFP had a disequalizing effect on education funding in the state.

Table 5 - Variances of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	16,381.98
With transfers	27,027.00

Standard Deviation

The standard deviation is the square root of the variance. The smaller the vale of the standard deviation, the smaller the variation in the distribution of revenues. The smaller the variation, the better the equity of the distribution.

Table 6 displays the values derived from the calculation of the standard deviation. The standard deviation of total general fund revenue per weighted FTE before capital outlay transfers was 127.99. The standard deviation of total general fund revenue per weighted FTE after capital outlay transfers increased to 164.40. The increase in the variation of the standard deviation indicated a decrease in equitable distribution of funds as a result of the transfer of funds from capital outlay. This indicates that the inclusion of the capital outlay transfers decreased the equity of the distribution system.

Table 6 - Standard Deviations of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	127.99
With transfers	164.40

Coefficient of Variation

The coefficient of variation is the standard deviation divided by the mean or square root of the variance divided by the mean. It is expressed as the ratio of the standard deviation of the distribution to the mean of the distribution. The smaller the value of the coefficient of variation, the smaller the variation in revenues per district. The smaller the variation, the better the equity of the distribution of revenues. The purpose of this measure is to control for variation in the magnitude of the means of the populations.

Table 7 displays the values derived from the calculation of the coefficient of variation. The coefficient of variation in the total general fund revenues per weighted FTE before transfers was .04. The coefficient of variation in total general fund revenues per weighted FTE after transfers was .05. This increase in value of the coefficient of variation indicated a decrease in equitable distribution of funds as a result of the transfer of funds from capital outlay.

Table 7 - Coefficients of Variation of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	.04
With transfers	.05

McLoone Index

The McLoone index is the ratio of the sum of a variable if each of the variables below the mean had values equal to the mean of the population. Values for the McLoone Index fall between zero and one. The larger the value of the McLoone Index (up to 1), the closer the lower half of the distribution is to the median of the distribution. The McLoone index considers only the districts below the mean. This implies that the average expenditure was adequate to provide a basic educational program. The McLoone index calculation indicated that the state funding distribution mechanism was equitable for districts funded below the mean.

Table 8 displays the values derived from the calculation of the McLoone Index. The McLoone Index of the total general fund revenue per weighted FTE before capital outlay transfers was .98612. The McLoone index of the total general fund revenue per weighted FTE after capital outlay transfers was .96677. Without transfers, 50 percent of the districts below the mean were funded at a level that provided 98.6 percent of the funds they would have received is they had been funded at the mean level for the state. With transfers, 50 percent of the districts were funded at 96.7 percent of the level of funding they would have received if they had been funded at the mean level for the state. This decrease in the McLoone index indicated a decrease in equity in the distribution of funds.

Table 8 - McLoone Indices of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	.98612
With transfers	.96677

Gini Coefficient

The Gini coefficient indicates how far the distribution of revenues is from providing each percentage of students with the same percentage of revenues. The smaller the value of the Gini coefficient, the more equitable the distribution of revenues in providing a specified percentage of students with the same percentage of revenues such as 50 percent of the students receiving 50 percent of the funds. In a perfect situation, the two percentages would be the same and would produce a Gini coefficient of zero indicating perfect equity without regard to wealth. Values range from zero to one. The smaller the value of the Gini coefficient, the greater the equity of the distribution.

Table 9 displays the values derived from the calculation of the Gini Coefficient. The Gini Coefficient of the total general fund revenues per weighted FTE before capital outlay transfers was .01116. The value of the Gini Coefficient of the total general fund revenue per weighted FTE after capital outlay transfers was .02048. The Gini Coefficient calculations indicated a high degree of equity in the state funding distribution system. Transfers included in the calculation decreased the equity of the funding distribution system and made the overall distribution more a function of local wealth.

Table 9 - Gini Coefficients of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	.01116
With transfers	.02048

Lorenz Curve

The Lorenz Curve in Appendix B graphically illustrates the Gini Coefficient and represents the percent of students on the abscissa and the cumulative percent of revenues on the ordinate. Data used to plot the Lorenz curves were revenues per weighted FTE before and after transfers in each school district. The increasing area under the curve indicates increasing variability.

Measures of Fiscal Neutrality

Correlation Coefficient

Simple correlation describes the degree to which two variables are associated. In this study the two variables are wealth as the independent variable and revenues per weighted FTE as the dependent variable. The correlation coefficient has values that range from -1.0 to +1.0. When two variables are negatively related, larger values of one tend to be accompanied by smaller values of the other. A value of +1.0 indicates a perfect positive linear relationship and a value to -1.0 a perfect negative linear relationship. A value of 0 indicates no linear relationship between the two variables. A fiscally neutral system is indicated by no relationship between wealth and revenues per weighted FTE.

Table 10 displays the values derived from the calculation of the correlation coefficient. The correlation coefficient of .631 without transfers increased to .678 with the transfers. The effect of the additional revenues from capital outlay transfers was an increase in the relationship between wealth per weighted FTE in each district and revenues per weighted FTE in each district. The overall effect of the capital outlay transfers was to decrease the fiscal neutrality of the distribution of funds.

Table 10 - Correlation Coefficients of General Fund Revenue per Weighted FTE with and without Capital Outlay Transfers

Without transfers	.631
With transfers	.678

Coefficient of Determination

The square of the simple correlation is the coefficient of determination and is the portion of variation in the dependent variable explained by the relationship to the independent variable.

Table 11 displays the values derived from the calculation of the coefficient of determination. The coefficient of determination without transfers was .398 and with transfers was .460. The overall increase in the values of the coefficient indicated an effect on the percentage of variation in the distribution of revenues per weighted FTE in each district to the wealth per weighted FTE in each district. When additional revenues from capital outlay transfers were included in the calculation of the coefficient of determination, the percentage of variance in the distribution of revenues per weighted FTE in each district related to the wealth per weighted FTE in each district increased. The effect of the transfers was to strengthen the relationship between revenues per weighted FTE and the wealth of the community thereby decreasing fiscal neutrality.

Table 11 - Coefficient of Determination of General Fund Revenues per Weighted FTE with and without Capital Outlay Transfers

Without transfers	.398
With transfers	.460

Slope of the Regression Line

The slope of the regression line measures the magnitude of the relationship between two variables. The slope indicates the size of the change in the dependent variable associated with a one-unit change in the independent variable. A fiscally neutral public school funding system has a slope of zero. The higher the value of positive slope the more inequitable the relationship between wealth and revenues.

Table 12 displays the values derived from the slope of the regression line. The slope of the regression line both before and after transfers was .001. The additional revenues from the transfers included in the calculation of the slope indicated no variation, at this level of significance, in the distribution of revenues per weighted FTE as wealth per weighted FTE in each district changes.

Table 12 - Slopes of the Regression Lines with and without Capital Outlay Transfers

Without transfers	.00134
With transfers	.00151

Summary

Measures of equity and fiscal neutrality were applied to the distribution funds among Florida school districts before and after capital outlay transfers from the capital outlay fund to the general fund.

The purpose of this study was to determine the effects of capital outlay transfers from the capital outlay fund to the general fund on the equity of a state school finance system. The variable measured was revenues per weighted FTE before and after transfers. The measures of equity used in this study were the mean, range, restricted range, federal range ratio, variance, standard deviation from the mean, coefficient of variation, McLoone Index, and Gini Coefficient. Table 13 displays the effects of the values derived from the calculations of the measures of equity. A summary of the results derived from the measures of equity is presented in Table 13.

Table 13 - A Summary of the Results Derived from the Measures of Equity

Statistic	Effect of Transfers on Equity
Box plot	Decreased Equity
Range	Increased Equity
Restricted Range	Decreased Equity
Federal Range Ratio	Decreased Equity
Variance	Decreased Equity
Standard Deviation	Decreased Equity
Coefficient of Variation	Decreased Equity
McLoone Index	Decreased Equity
Gini Coefficient	Decreased Equity
Lorenz Curve	Decreased Equity

Measures of fiscal neutrality used in this study were the correlation coefficient, coefficient of determination, and the slope of the regression line. The independent variable was wealth per weighted FTE in each district and the dependent variable was revenues per weighted FTE in each district. Table 14 displays a summary of the effects of the values derived from the calculation of the measures of fiscal neutrality. A summary of the results derived from the measures of fiscal neutrality is presented in Table 14.

Table 14 - A Summary of the Results Derived from the Measures of Fiscal Neutrality

Statistic	Effect of Transfers on Fiscal Neutrality
Correlation Coefficient	Decreased Neutrality
Coefficient of Determination	Decreased Neutrality
Slope of the Regression Line	Negligible

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND IMPLICATIONS

Summary

Education is big business and money makes a difference.[1] Education is negatively impacted when the importance of adequate and equitable resources is neglected. Education is financed in many different ways throughout the nation. Numerous funding mechanisms have been developed to distribute the funding of state school finance programs. Provision for equalization of educational opportunities among districts was the responsibility of the state legislature through funding of the school finance funding formulas.

One of the most important issues in the study of state school finance programs for education was equity in the distribution of education resources. Early researchers established the meaning of equity as equalization of educational opportunity. The principle of fiscal neutrality recognized that shares of educational opportunities should not be a function of local wealth. It was generally accepted that equity required fiscal neutrality.

The present study used these equity principles of school finance to answer the question: What were the effects on the relationship of the equity among Florida school districts of total general fund educational revenue after capital outlay transfers from capital outlay funds to the general fund for the most recent year data were available (1994-95) in Florida?

---

[1] Thompson, Wood, and Honeyman, 7.

To determine the effects of capital outlay transfers on the relationship of the equity among school districts, a research design was developed that examined equity before and after the capital outlay transfers from the capital outlay fund to the general fund. Measures of equity were applied to total revenue before and after the transfers. The equity among school districts was established prior to the transfers. Then additional revenues in the form of transfers were introduced and included in the equity calculations. The difference in the calculated values indicated the effects of the additional revenues on the equity of a state school finance system.

Measures of equity used were the mean, range, restricted range, federal range ratio, variance, standard deviation, coefficient of variation, McLoone Index, and Gini Coefficient. Revenues per weighted FTE in each district distributed through the school finance funding formula and capital outlay transfers were the variables measured. The measures of fiscal neutrality used were the correlation coefficient, coefficient of determination, and the slope of the regression line. The study examined the relationship between the independent variable wealth per weighted FTE in each district and the dependent variable of revenues per weighted student in each district.

This study was undertaken for several reasons. Attention nationwide had focused on school finance issues. Equity in the distribution of educational resources had been the issue of substantial litigation in state and federal courts across the country. This study was intended to make a contribution to the understanding of fiscal equity in education funding.

Findings

Based on the values calculated from the measures of equity, the following findings were derived:

1. With transfers, the increase in variation in the distribution of revenues per weighted FTE indicated a disequalizing effect from the capital outlay transfers to the general fund.

Based on the values calculated from the measures of fiscal neutrality, the following findings were derived:

1. With transfers, the increase in the strength of the relationship between the wealth of the district and the revenues available decreased the fiscal neutrality of the funding system. The relationship was positive and indicated that as the wealth of the district increased the available revenues increased.

2. With transfers, the absence of a change in revenues per weighted FTE in each district as wealth per weighted FTE in each district changed by one unit, as calculated by the slope of the regression line, indicated that the foundation program provided a distribution of revenues per weighted FTE in each district unaffected by wealth.

Conclusions

The following conclusions were reached regarding the research question:

1. Additional revenues from transfers had the effect of increasing the average revenues per weighted FTE in the districts of the state school finance system examined. Including transfers in the calculation of the mean indicated that additional revenues from the transfers increased the average revenues per weighted FTE in districts.

2. Additional revenues from transfers had the effect of decreasing the equity among the school districts examined. Including transfers in the calculation of the restricted range, federal range ratio, variance, standard deviation, and coefficient of variation indicated that the additional revenues increased the variation in the distribution of revenues per weighted student in districts.

3. Additional revenues from transfers had the effect of increasing the revenues per weighted FTE in each district below the median in order to bring those districts up to the median value of revenues per weighted student in each district. Including transfers in the calculation of the McLoone Indices indicated an increase in the variation in the distribution of revenues per weighted FTE in districts below the median. The effect of the transfers decreased the equity among the school districts.

4. Additional revenues from transfers had the effect of providing a distribution of revenues per weighted FTE such that a certain percent of students in the distribution were provided close to the same percent of revenues. Including transfers in the calculation of the Gini

Coefficients indicated a slight increase in variation in the distribution of revenues. The effect of the additional revenues from transfers decreased the equity of the state school finance distribution system.

5. Additional revenues from transfers had the effect of increasing the relationship between the wealth and revenues per weighted FTE among districts. Including the transfers in the calculation of the correlation coefficient and the coefficient of determination indicated an increase in the relationship between the independent and dependent variables. The result was a state school finance distribution system less consistent with the principle of fiscal neutrality.

6. Additional revenues from transfers had no effect on the distribution of revenues calculated in the slope of the regression line.

Implications for Public Policy

This study indicates the following implications:

1. Due to the shifting priorities of the state legislature indicated by the decrease in general revenue funds as a percentage of general revenue for public education, the level of school funding for capital outlay has been adversely impacted as a result of the transfer process. This has resulted in a negative effect on the equitable distribution of funds on a weighted FTE basis.

2. It is important to consider whether the transfer of capital outlay funds adds to the increasing deterioration of physical plant as a result of inadequate capital outlay funding.

REFERENCES

Abbott v. Burke(1990), 119 N.J. 287, 575 A.2d 359 [60 Ed. Law Rep. [1175]], 1176.

Agron, J., Putting Together the Puzzle-Why Schools Need $112 Billion to Repair Buildings and What They Can Do About It, American School and University, June 1995, 24.

Alabama v. Hunt, CV-90-883-R, Circuit Court for Montgomery County, Alabama, (1993), 5, 37, 38, 59, 65, 122, 123, 124.

Berne, R. and L. Stiefel, "Taxpayer Equity in School Finance Reform: The School Finance and the Public Finance Perspectives," Journal of Education Finance, Vol. 5, No. 1 (Summer 1979), 37.

Berne, R. and L. Stiefel. The Measurement of Equity in School Finance. Baltimore: The Johns Hopkins Press, 1984, 7.

Blanton, W., F. Darden and J. Mee, Florida School Boards Association Boarder-Line, May 31, 1991, 2.

Blase v. State of Illinois, 55 Ill2d. 94 (1973).

Burrup, P. E. and V. Brimley, Jr., Financing Education in a Climate of Change. New York, NY: Allyn and Bacon, 1-2.

Carroll, S. J. and R. E. Park, The Search for Equity in School Finance Cambridge, MA: The Ballinger Press, 1983, 29.

Coalition for Adequacy and Fairness in School Funding, v. State of Florida, Complaint 1994, para. 4, 5.

Coalition for Equitable Funding v. State, 811 P.2d, 116 (1991).

Coons, J. E., W. Clune, and S. D. Sugarman, Private Wealth and Public Education. Cambridge, MA: Harvard University Press, 1970, 72.

Cubberly, E. P., School Funds and Their Apportionment. New York: Columbia University, 1906, 52.

Dupree v. Alma School District No. 30, 651 S.W.2d 90 (Ark. 1983).

Ferrell, C. E., Florida's Education Lottery: Deception of Design, Seminole County School Board Report, 1990.

Florida Constitution 1968, Article IX, Section 1.

Florida Constitution, Article IX, Section I, 1994.

Florida Constitution, Article XII, Section 9(d); Article XII, Section 9(a)(2), 1994.

Florida Department of Education v. Glasser, 622 So.2d 944 (Fla. 1993).

Florida Department of Education, 1994 Review of the Legislature: A Summary of Legislative Actions Affecting Florida Public Schools, (Tallahassee, FL: Florida Department of Education), 1994.

Florida Department of Education, 1994-95 Florida Education Finance Program Statistical Report, EIAS Series 95-3, (Tallahassee, FL: Florida Department of Education), July 1994.

Florida Department of Education, District Annual Budget Summaries, (Tallahassee, FL: Florida Department of Education), 1994.

Florida Department of Education, Financial and Program Cost Accounting and Reporting for Florida Schools, (Tallahassee, FL: Florida Department of Education), 1994.

Florida Statute 235.435, 1994.

Florida Statute 236.012(1), 1994.

Florida Statute 236.081(4), 1994.

Florida Statute 236.25, 1994.

Florida Statute 236.31, 1994.

Florida Statute 236.42, 1994.

Fox, J. N., "School Finance and the Economics of Education: An Essay Review of Major Works," Educational Evaluation and Policy Analysis (Spring 1989), 70.

Franklin, W. B., "Public Education--No. 5," The Floridian, Tallahassee, October 17, 1846, 2.

Garms, W. I., J. W. Guthrie, and L. Pierce, School Finance: The Economics and Politics of Public Education, 2d ed. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1988, 130.

Gould v. Orr, 244 Neb. 633 (1993).

Helena Elementary School District No. 1 v. State of Montana, 769 P.2d 776 (1989).

Honeyman, D. S., School Facilities and State Mechanisms that Support School Construction: A Report from the Fifty States, Journal of Education Finance (Fall 1990), vol. 16, 2:247-272.

Honeyman, D. S., Finance and the Problems of America's School Buildings, The Clearing House (November/December 1994a), vol. 68, 2:95-97.

Honeyman, D. S., Florida Education Finance Program Review Panel, Presentation by Dr. David S. Honeyman, Professor University of Florida, January 10, 1994b, Tallahassee, FL.

Honeyman, D. S., A Report on Educational Facilities, Developments in School Finance, W. J. Fowler, Jr., ed. (January 1995), Washington, DC: U. S. Department of Education: 39-50.

Horton V. Meskill(1974), 332 A.2d 113.

Horton v. Meskill(1977), 376 A.2d 359, (Horton II).

Horton v. Meskill, 332 A.2d 113 (1974).

Johns, R. L. and E. L. Morphet, The Economics Financing of Education, 3d ed. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1975, 234.

Johns, R. L., "State Financing of Elementary and Secondary Education," in Education in the States: Nationwide Development Since 1900. Washington, DC: National Education Association of the United States, 1969, 196.

Johns, R. L., K. Alexander, and K. J. Jordan Financing Education: Fiscal and Legal Alternatives. Columbus, OH: Merrill (1972).

Johns, R. L., The Evolution of the Equalization of Educational Opportunity in Florida 1926 to 1976. Gainesville, FL: Institute for Education Finance, 1976, 41-42.

Jones, T. H., Introduction to School Finance. New York: Macmillan Publishing Company, 1985, 199.

Jordan, F., and M. P. McKeown, "Equity in Financing Public Elementary and Secondary Schools," in James W. Guthrie, School Finance Policies and Practices Cambridge, MA: Ballinger Publishing Company, 1980, 96-97.

Kirby v. Edgewood Independent School District, 761 S.W.2d 859 (Tex 1988).

Laws of Florida (1851), Chapter 343, 104.

Levittown v. Nyquist(1982), 439 N.E.2d 359 NY.

Maxwell, J. A. and J. R. Aronson, Financing State and Local Government, 3d ed. Washington, DC: The Brookings Institute, 1977.

McGinnis v. Ogilvie, 384 US 322 (1969).

Milliken v. Green, 212 N.W.2d 711 (Mich 1973).

Monk, D. H., Educational Finance, New York: McGraw-Hill Publishing Company, 1990a, 48-50.

Monk, D. H., Educational Finance: An Economic Approach. New York: McGraw-Hill Publishing Company, 1990b, 44.

Moore, D. S., Statistics, 3d ed. New York: W. H. Freeman and Company, 1991, 220-223.

Mort, P. R., The Measurement of Educational Need. New York: Teachers College, Columbia University, 1924, 69.

Musgrave, R. A. and P. B. Musgrave, Public Finance in Theory and Practice, 5th ed. New York: McGraw-Hill Book Company, 1989.

Pauley v. Kelly(1979), 162 W.Va. 672, 255 S.E.2d 859, 165.

Pauley v. Kelly, 255 S.E.2d 859 (W. Va. 1979).

Pollock, A. D., The Evolution of the Organizational Structure of Local Public Education in Florida 1945-47. Doctoral Dissertation, Florida State University, 1969, 13.

Pyburn, N. K., Documentary History of Education in Florida 1822-1860. Tallahassee, FL: Florida State University Press, 1951, 52.

Report to the Commissioner: Facilities Task Force, Florida Department of Education: Office of Educational Facilities, (February 1990).

Robinson v. Cahill(1972), 287 A.2d 187, aff'd 303 A.2d 273 (New Jersey, 1973).

Robinson v. Cahill, 287 A.2d 187 (1972), aff'd 303 A.2d 273 (New Jersey, 1973).

Rose V. Council for Better Education, 790 SW2d 186 [60 Ed.Law Rep. [1289]] (KY. 1989), 1315.

San Antonio Independent School District v. Rodriguez(1973), 411 U.S. 1, 93 S.Ct. 1278, 36 L.Ed.2d 16.

School Facilities: Condition of America's Schools, Washington, DC: United States Government Accounting Office, (GAO/HEHS-95-61), February 1995.

Seattle School District No. 1 v. Washington, 585 P.2d 71 (Wash 1978).

Seay, J. W., "Florida," in Education in the States: Nationwide Development Since 1900. Washington, DC: National Education Association of the United States, 1969, 244.

Serrano v. Priest(1971), 487 P.2d 1241.

Serrano v. Priest(1976), 557 P.2d 929.

Shiver, L. A., A Historical Review of the Development of Florida's School Finance Plan and the Fiscal Equalization Effects of the Florida Education Finance Program, (Doctoral Dissertation, University of Florida, 1982), 22.

Shofstall v. Hollins, 515 P.2d 590 (Ariz 1973).

Sparkman, W. E., "School Finance Challenges in State Courts", in The Impacts of Litigation and Legislation on Public School Finance: Adequacy, Equity and Excellence, Julie K. Underwood and Deborah A. Verstegen. New York: Harper and Row Publishers, 1990, 193-194.

St. Johns County, Florida v. Northeast Florida Builders Association, 583 So.2d 635, 641, (Fla. 1991), 14.

Stark, S., An Examination of the Florida Education Lottery, Occasional Paper No. 3, September, 1991, Gainesville, FL: University of Florida, and UCEA Center for Education Finance, 3.

Stark, S., R. C. Wood, and D. S. Honeyman, The Florida Education Lottery: Its Use as a Substitute for Existing Funds and its Effects on the Equity of School Funding, Journal of Education Finance (Winter 1993), vol. 18, 3:231-242.

Strayer, G. D. and R. M. Haig, The Financing of Education in the State of New York, vol. 1, New York: Macmillan, 1923, 57.

Summers, S. R., D. S. Honeyman, J. L. Wattenbarger, and M. D. Miller, An Examination of Supplantation and Redistribution Effects of Lottery Allocations to a Community College System, Journal of Education Finance (Fall 1995), vol. 21, 2:236-253.

Summers, S. R., M. D. Miller, and D. S. Honeyman, The Florida education Lottery: A Lotto Nonsense or a Wise Bet for Florida's Community Colleges? The Journal of Applied Research for the Florida Association of Community Colleges (Winter 1995), 28-32.

Tennessee V. Small School Systems et al. v. McWherter, 851 S.W.2d 139 (1993).

Thompson, D. C., R. C. Wood, and D. S. Honeyman, Fiscal Leadership for Schools: Concepts and Practices. White Plains, NY: Longman Publishing Group, 1993.

Thro, W. E., "The Third Wave: The Impact of the Montana, Kentucky, and Texas Decisions on the Future of Public School Reform Litigation," Journal of Law and Education 19 (Spring 1990): 1641-1642.

Wagner, B. and S. J. Hedges, "Education in Decay: Burdened by Bureaucracy, The Nation's Schoolhouses are Crumbling", U. S. News and World Report, September 1994, 26.

Webb, L. D., M. M. McCarthy, and S. B. Thomas, Financing Elementary and Secondary Education. Columbus, OH: Merrill Publishing Co., 1988, 258.

Wood, R. C. and D. C. Thompson, Educational Finance Law: Constitutional Challenges to State Aid Plans - An Analysis of Strategies. Topeka: 1993, 71.

APPENDIX A
BOXPLOTS

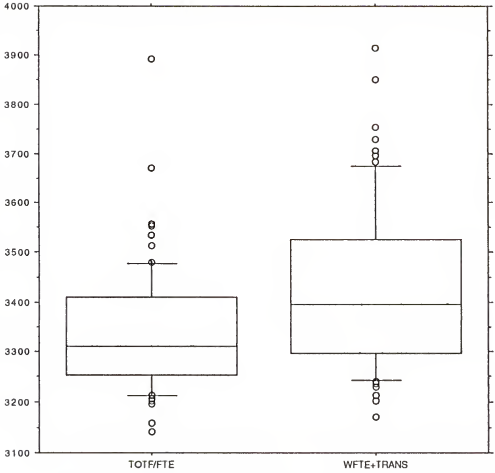

Figure A-1: Boxplots for total Florida Education Finance Program funding per weighted FTE without transfers (TOT/FTE) and total Florida Education Finance Program funding per weighted FTE with transfers (WFTE+TRANS).

APPENDIX B
LORENZ CURVE

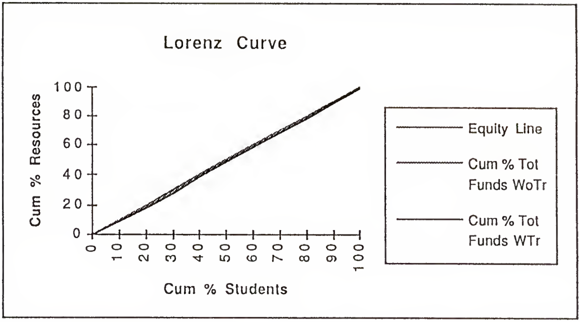

Figure B-1: Lorenz Curve for the distribution of funds without transfers (Cum % Tot Funds WoTr) and with transfers (Cum % Tot Funds WTr) through the FEFP Formula to K-12 public schools for fiscal year 1994-95.

BIOGRAPHICAL SKETCH

Mary Chambers is a Florida native, born in Ft. Lauderdale. Mary is a certified public accountant licensed in Florida and is employed by the School Board of Alachua County as the Assistant Superintendent for Business Services. She has served in various capacities in Florida educational systems for the past twenty years including two years as an auditor for the Auditor General auditing governmental agencies such as school districts, universities, and community colleges.

A product of Florida schools, Mary attended Bay High School in Panama City, Florida, and graduated from Choctawhatchee High School in Ft. Walton Beach, Florida. Mary earned a Bachelor of Arts degree in accounting from the University of West Florida and a Master's degree in public administration from the University of Central Florida.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

David S. Honeyman, Chairman
Professor of Educational Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

James W. Hensel

James W. Hensel
Professor of Educational Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

M. David Miller

M. David Miller
Associate Professor of Foundations of Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

R. Craig Wood
Professor of Educational Leadership

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

May 1996

Roderick J McDavis
Dean, College of Education

Karen A. Holbrook
Dean, Graduate School